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ACIDIC PRECIPITATION IN ONTARIO STUDY – APIOS

MONTHLY/28 DAY CUMULATIVE PRECIPITATION CHEMISTRY LISTINGS JUNE 1980 – DECEMBER 1981

MARCH 1983

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This report was
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ACIDIC PRECIPITATION IN ONTARIO STUDY - APIOS

MONTHLY/28 DAY CUMULATIVE PRECIPITATION CHEMISTRY LISTINGS
JUNE 1980 - DECEMBER 1981

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Atmospheric Research and Special Programs Section
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March 1983

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PART I

INTRODUCTION

INTRODUCTION

The data listed herein are a summary of the results acquired from the APIOS cumulative precipitation sampling network from startup time (partial operation June, 1980), to December, 1981. The sampler utilized for colleciton of wet cumulative deposition is the M.I.C. Type "A" collector (Sangamo). During May to October when precipitation is mainly in the form of rain, the Sangamo collector is equipped with a 34 cm x 61 cm polyethylene bag insert. For snow and snow/rain collection from November to April, deeper collection vessels are utilized (122 cm) with 34 cm x 122 cm polyethylene bag inserts. The deeper collection vessel is utilized to reduce snow blow out. The period of accumulation per sample is approximately one month.

All data presented in this report have been screened for validity. Remarks and qualifications have been appended to records, and/or results where necessary. The screening procedure involved checking each record for chemical analysis integrity (e.g. ionic balance, observed vs. theoretical conductance). Gross limit checks were applied by comparing each analytical result with the approximate 97.5 percentile. The data were also screened for outliers statistically by applying the Dixon Ratio test to the highest and lowest values observed in each region on a monthly basis. Outliers were determined at the 95% level of confidence. Records and/or results deemed unreliable are flagged but not deleted. Sampler collection efficiency is deemed abnormal if found to be less than 50% or greater than 120%. If collection efficiency is found to be less than 50% then the reported sample volume is flagged as unreliable. Also, if it is reported that the sampled has spilled then the calculated efficiency is not reported in the data listings.

Station Identification

The station identification is defined by four descriptive fields (e.g., Dorest/Cumulative/Wet #20). The first field refers to the sampling location. The second and third fields describe the sampling interval and the sampling type (e.g., wet or dry) respectively. The last numeric field refers to the index code utilized on the location map. All precipitation chemistry listings are given in alphabetic order by station name within each region.

Cumulative Precipitation Chemistry Listings

Sample type, as coded in the data listings, represents the state of the collected sample at time of removal. The sample date represents the date on which the sample was removed from the sampler. All chemical analyses were done on unfiltered samples. Lab pH entries represent pH measurements obtained at the MOE Laboratory in Toronto. Reported total hydrogen ion concentraiton (mg l^{-1}) represents a titration of the sample with NaOH to an end point pH of 8.3. For a complete outline of lab analytical methodology please consult the Ontario Ministry of the Environment report "Outlines of Analytical Methods" coordinated by Water Quality Section, Laboratory Services Branch, June 1981.

Of the reported metals, aluminum, copper, iron and zinc were found to display significant adsorptive losses. As a result, a leach solution of 5% HNO_3 (1 litre) is placed in the emptied collection bag for 24 hours. The leach solution is then analysed for the above metals and a final metal concentration is then calculated. In the calculation of final metal concentration, if a detection limit is encountered, a value corresponding to one half the detection limit is utilized.

Co-located with each sampler is a cumulative precipitation gauge which serves as a primary standard of precipitation during the collection period. However, if the cumulative gauge depth is missing or is thought to be inaccurate, then an approximate precipitation depth is determined. The approximation is made by accumulating three surrounding CLIMAT* station daily depth gauge results individually and then interpolating linearly to the APIOS station. Sometimes precipitation gauge results could not be calculated by the above method, in which case the data are missing in the tables to follow.

Calculation of Equivalent Precipitation Depth (mm)

$$\text{Equivalent Precipitation Depth (mm)} = \frac{\text{Volume Collected (ml)}}{1000} \times 30.8$$

Calculation of Observed Sampling Efficiency

$$\% \text{ Efficiency} = \frac{\text{Equivalent Precipitation Depth (mm)}}{\text{Gauge Depth (mm)}} \times 100\ \%$$

Field Comment Code Index

A - Insects in sample
B - Leaves in sample
C - Particulates in sample
D - Fibres in sample
E - Sample not submitted
F - Sampler malfunctioned
G - Sample spilled or leaked
H - Volume incorrect
I - Event(s) missed
J - Wet side open when not precipitating
K - No precipitation collected
L - Part of event missed
Q - Other

* Environment Canada, Atmospheric Environment Service Meteorological Observations in Eastern Canada, Monthly Record

Office Comment Code Index

C - calculated/observed conductance discrepancy
H - calculated/observed pH discrepancy
J - Δ pH large
M - poor ionic balance
N - abnormal sampler efficiency
T - free hydrogen exceeds total hydrogen
X - sample lost

Analytical Result Remark Code Index

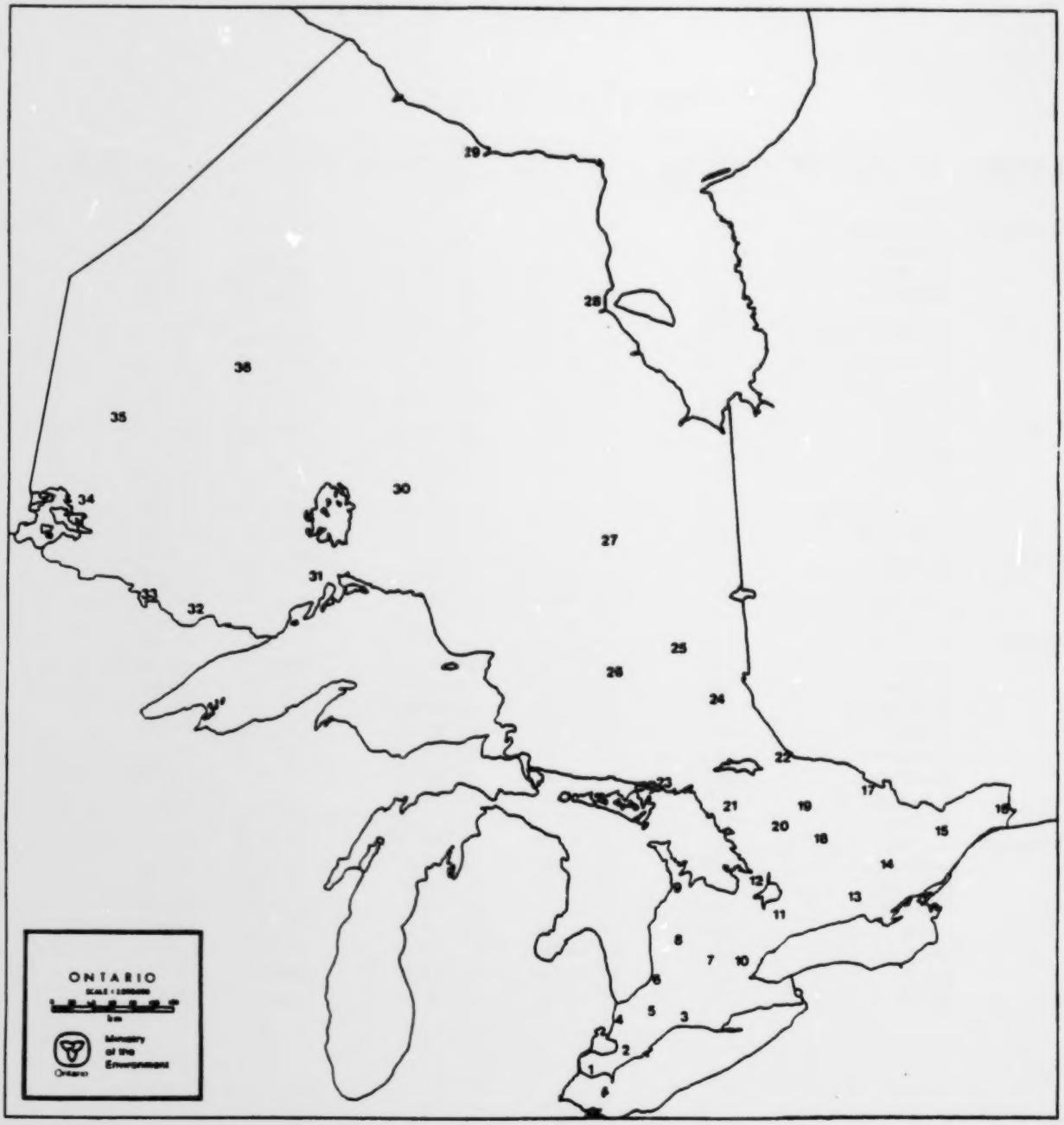
> - actual result greater than value reported
< - actual result less than value reported
<T - actual result less than criterion of detection
<W - no response, minimum possible result reported
A - approximate value
U - unreliable result
L - bag leach result not available
L< - bag leach result not available and precipitation sample result has been reported as a detection limit

RK/en/AR31-10

PART II

STATION DESCRIPTION AND LOCATION MAP

STATION LOCATION MAP



1 - COLCHESTER
2 - MERLIN
3 - PORT STANLEY
4 - WILKESPORT
5 - ALVINSTON
6 - HURON PARK
7 - WATERLOO
8 - PALMERSTON
9 - SHALLOW LAKE
10 - MILTON
11 - UXBRIDGE
12 - COLDWATER
13 - CAMPBELLFORD
14 - KALADAR
15 - SMITH'S FALLS
16 - DALHOUSIE MILLS
17 - GOLDEN LAKE
18 - WILBERFORCE
19 - WHITNEY
20 - DORSET
21 - MCKELLAR
22 - MATTAWA
23 - KILLARNEY
24 - BEAR ISLAND
25 - GOWGANDA
26 - RAMSEY
27 - MOONBEAM
28 - ATTAWAPISKAT
29 - WINISK
30 - NAKINA
31 - DORION
32 - QUETICO CENTRE
33 - LAC LA CROIX
34 - EXP. LAKES AREA
35 - EAR FALLS
36 - PICKLE LAKE

APIOS CUMULATIVE WET DEPOSITION NETWORK SITE DESCRIPTIONS

MOE REGION	STATION NAME	ELEVATION (m above MSL)	LATITUDE (North)	LONGITUDE (West)	UTM GRID CO-ORDINATES (Northing)	(Easting)
Southwestern	Colchester	183	41°59'15"	82°55'41"	4650000	340300
	Merlin	191	42°14'47"	82°13'30"	4676400	398950
	Pt. Stanley	213	42°40'22"	81°09'55"	4724050	486700
	Wilkesport	183	42°42'11"	82°21'13"	4728350	389150
	Alvinston	221	42°49'36"	81°50'04"	4942000	431550
	Shallow Lake	229	44°34'54"	81°05'24"	4936200	492850
	Palmerston	389	43°48'19"	80°54'12"	4850050	507750
	Huron Park	250	43°17'28"	81°30'03"	4793000	459350
	Waterloo	343	43°28'39"	80°33'09"	4813750	533500
Central	Dorset	320	45°13'26"	78°55'52"	5009650	662400
	Milton	221	43°31'03"	79°55'54"	4818600	586350
	Uxbridge	244	44°12'46"	79°12'38"	4896800	643000
	Wilberforce	396	45°00'54"	78°12'58"	4988150	719400
	Campbellford	175	44°17'28"	77°47'33"	4907600	277150
	Coldwater	280	44°37'31"	79°32'08"	4942200	615900
Southeastern	Kaladar	244	44°41'31"	77°09'18"	4950800	329250
	Smith's Falls	122	44°56'41"	75°57'48"	4977100	423950
	Dalhousie Mills	69	45°19'00"	74°28'13"	5018100	541550
	Golden Lake	160	45°36'48"	77°12'03"	5053200	328400
Northeastern	McKellar	244	45°30'57"	79°55'19"	5040600	583950
	Killarney	183	45°59'26"	81°29'18"	5092900	462200
	Mattawa	198	46°16'43"	78°49'19"	5127150	667800
	Bear Island	305	46°58'22"	80°04'40"	5202400	570350
	Ramsey	427	47°26'33"	82°20'14"	5254900	399200
	Gowganda	343	47°39'04"	80°46'32"	5277300	516600
	Moonbeam	244	49°19'16"	82°08'46"	5463600	416650
	Attawapiskat	9	52°56'00"	82°24'00"	NA	NA
	Whitney	412	45°32'21"	78°15'35"	5045950	713950
Northwestern	Dorion	244	48°50'33"	88°36'45"	5410800	382150
	Nakina	320	50°10'38"	86°42'40"	5558150	520950
	Ear Falls	350	50°38'31"	93°13'13"	5609800	484150
	Pickle Lake	360	51°27'41"	90°12'04"	5704800	694550
	Lac la Croix	368	48°21'14"	92°12'32"	5355900	558400
	Quetico Centre	420	48°44'24"	91°12'08"	5399750	632100
	E.L.A.	123	49°39'22"	93°43'28"	5500950	447350
	Winisk	9	55°12'00"	85°08'00"	NA	NA

PART III

SOUTHWESTERN REGION

CUMULATIVE PRECIPITATION CHEMISTRY LISTINGS

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : ALVINSTON/CUMULATIVE/WET #05 PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 09-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
SEP 30.80	SEP 5.80	900	907	1	75.0	9	743	2	1	78	A	
OCT 31.80	SEP 30.80	****	1500	1	77.9	9	744	2	1	62		
NOV 28.80	OCT 31.80	1300	1315	3	22.4	9	745	2	1	61		H
DEC 31.80	NOV 28.80	845	920	4	70.5	9	746	2	1	***		X
JAN 30.81	DEC 31.80	920	830	2	26.5	9	747	2	1	***	F	
FEB 27.81	JAN 30.81	830	930	4	86.3	9	748	2	1	56		
MAR 30.81	FEB 27.81	830	835	3	30.0	0	1956	2	1	50		H
APR 30.81	MAR 30.81	815	815	1	118.0	0	1944	2	1	67		
JUN 1.81	APR 30.81	815	1500	1	40.0	0	19009	2	1	86	CD	
JUN 30.81	JUN 1.81	1530	800	1	40.0	0	19025	2	1	141	AC	N
JUL 31.81	JUN 30.81	800	830	1	59.0	0	19041	2	1	58	B	
AUG 31.81	JUL 31.81	800	830	1	91.0	0	19057	2	1	114	AD	
SEP 30.81	AUG 31.81	800	830	1	165.0	0	19076	2	1	60	P	
OCT 30.81	SEP 30.81	830	1000	1	117.2	9	19094	2	1	58	BC	
NOV 30.81	OCT 30.81	1100	800	1	67.0	0	19114	2	1	78	AC	
JAN 5.82	NOV 30.81	800	826	3	82.0	0	19134	2	1	127	C	NHM

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
SEP 30.80	SEP 5.80	1915.0	57.0	3.91	0.1586	6.15	0.77	0.49
OCT 31.80	SEP 30.80	1575.0	27.0	4.29	0.0744	3.35	0.52	0.55
NOV 28.80	OCT 31.80	450.0	35.8	5.15	0.0658	6.10	1.30	U 1.56
DEC 31.80	NOV 28.80	******	*****	*****	******	*****	*****	*****
JAN 30.81	DEC 31.80	******	*****	*****	******	*****	*****	*****
FEB 27.81	JAN 30.81	1575.0	26.4	4.48	0.0684	2.40	0.50	0.57
MAR 30.81	FEB 27.81	495.0	43.0	4.40	0.0950	7.15	1.40	U 1.79
APR 30.81	MAR 30.81	2605.0	31.8	4.28	0.0944	4.00	0.60	0.43
JUN 1.81	APR 30.81	1120.0	62.0	3.93	0.1652	6.40	1.04	0.59
JUN 30.81	JUN 1.81	1840.0	32.0	4.19	0.0944	3.75	0.55	0.39
JUL 31.81	JUN 30.81	1125.0	42.2	4.16	0.1078	4.90	0.65	0.56
AUG 31.81	JUL 31.81	3380.0	54.5	3.95	0.1422	6.25	0.74	0.46
SEP 30.81	AUG 31.81	3240.0	31.5	4.20	0.0892	3.05	0.41	0.26
OCT 30.81	SEP 30.81	2217.0	22.4	4.61	0.0602	3.45	0.57	U 1.03
NOV 30.81	OCT 30.81	1718.0	24.4	4.39	0.0814	2.50	0.41	0.32
JAN 5.82	NOV 30.81	3394.0	U 125.0	U 9.62	0.0	1.15	0.30	U 12.00

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : ALVINSTON/CUMULATIVE/WET #05

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
SEP 30.80	SEP 5.80	0.23	1.15	0.080	0.200	0.040	0.590	U 0.076
OCT 31.80	SEP 30.80	0.41	0.57	0.105	0.040	0.070	0.400	0.006
NOV 28.80	OCT 31.80	0.32	2.53	0.245	0.210	0.120	1.910	0.085
DEC 31.80	NOV 28.80	*****	*****	*****	*****	*****	*****	*****
JAN 30.81	DEC 31.80	*****	*****	*****	*****	*****	*****	*****
FEB 27.81	JAN 30.81	U 1.09	0.67	0.075	U 0.250	U 0.610	0.380	0.012
MAR 30.81	FEB 27.81	0.77	2.04	0.350	0.270	0.420	1.560	0.016
APR 30.81	MAR 30.81	U 0.18	0.82	0.075	0.040	0.100	0.640	0.035
JUN 1.81	APR 30.81	0.28	1.20	0.105	0.060	0.060	0.980	0.015
JUN 30.81	JUN 1.81	0.15	0.75	0.060	0.040	0.050	0.560	0.012
JUL 31.81	JUN 30.81	0.18	0.82	0.120	0.040	0.020	0.680	0.015
AUG 31.81	JUL 31.81	0.25	0.68	0.145	0.090	0.040	0.590	0.015
SEP 30.81	AUG 31.81	0.02	0.48	0.035	0.020	0.020	0.310	0.018
OCT 30.81	SEP 30.81	0.14	0.40	U 0.200	0.050	0.020	0.336	0.014
NOV 30.81	OCT 30.81	0.13	0.37	0.050	0.030	0.080	0.310	0.006
JAN 5.82	NOV 30.81	U 15.60	0.32	U 0.900	0.220	U12.500	0.078	0.048

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINIUM MG/L
SEP 30.80	SEP 5.80	0.004	0.002	0.029	0.100	0.011	< 0.002	0.072
OCT 31.80	SEP 30.80	0.006	< 0.001	0.015	0.080	0.005	< 0.002	0.058
NOV 28.80	OCT 31.80	*****	*****	*****	*****	*****	*****	*****
DEC 31.80	NOV 28.80	*****	*****	*****	*****	*****	*****	*****
JAN 30.81	DEC 31.80	*****	*****	*****	*****	*****	*****	*****
FEB 27.81	JAN 30.81	0.006	0.002	0.032	0.062	0.008	< 0.002	0.044
MAR 30.81	FEB 27.81	0.017	0.004	0.066	0.142	0.017	< 0.002	0.050
APR 30.81	MAR 30.81	0.003	< 0.001	0.004	0.096	0.004	< 0.002	0.048
JUN 1.81	APR 30.81	0.006	< 0.001	0.016	U 0.304	0.012	0.002	0.102
JUN 30.81	JUN 1.81	0.003	0.002	L 0.004	L 0.038	0.006	< 0.002	L 0.051
JUL 31.81	JUN 30.81	0.006	< 0.001	0.011	0.092	0.012	< 0.002	0.047
AUG 31.81	JUL 31.81	0.006	< 0.001	0.012	0.055	0.009	< 0.002	0.046
SEP 30.81	AUG 31.81	0.002	< 0.001	0.004	0.021	0.005	< 0.002	0.016
OCT 30.81	SEP 30.81	0.005	< 0.001	0.006	0.065	0.009	< 0.002	0.024
NOV 30.81	OCT 30.81	0.002	< 0.001	0.009	0.024	0.007	< 0.002	0.007
JAN 5.82	NOV 30.81	0.018	< 0.001	0.048	0.250	0.003	< 0.002	0.221

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : ALVINSTON/CUMULATIVE/WET #05

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM MG/L	FREE H+ MG/L
SEP 30.80	SEP 5.80	0.002	0.0006	0.1230
OCT 31.80	SEP 30.80	0.003	< 0.0001	0.0513
NOV 28.80	OCT 31.80	*****	******	0.0071
DEC 31.80	NOV 28.80	*****	******	******
JAN 30.81	DEC 31.80	*****	******	******
FEB 27.81	JAN 30.81	0.009	U 0.0034	0.0331
MAR 30.81	FEB 27.81	0.012	U 0.0032	0.0398
APR 30.81	MAR 30.81	0.008	0.0004	0.0525
JUN 1.81	APR 30.81	0.006	0.0003	0.1175
JUN 30.81	JUN 1.81	L< 0.001	0.0004	0.0645
JUL 31.81	JUN 30.81	0.003	0.0003	0.0692
AUG 31.81	JUL 31.81	0.001	0.0002	0.1122
SEP 30.81	AUG 31.81	0.001	0.0002	0.0631
OCT 30.81	SEP 30.81	0.003	0.0002	0.0234
NOV 30.81	OCT 30.81	< 0.002	< 0.0001	0.0407
JAN 5.82	NOV 30.81	0.002	0.0002	U 0.0000

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : COLCHESTER/CUMULATIVE/WET #01 PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 04-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
SEP 30.80	SEP 2.80	900	900	1	27.7	9	718	2	1	182	A	N
OCT 31.80	SEP 30.80	920	905	1	44.6	9	719	2	1	74	AC	
NOV 28.80	OCT 31.80	905	915	1	34.7	9	720	2	1	27		N
DEC 31.80	NOV 28.80	925	916	4	52.0	0	721	2	1	21		N
JAN 30.81	DEC 31.80	923	915	4	21.0	0	722	2	1	56		
FEB 27.81	JAN 30.81	925	1215	1	65.0	0	723	2	1	93		
MAR 31.81	FEB 27.81	1240	902	1	14.0	0	1960	2	1	19	D	N
APR 30.81	MAR 31.81	902	912	1	121.0	0	1899	2	1	59	AF	
MAY 29.81	APR 30.81	900	905	1	41.0	0	19001	2	1	93	ADI	H
JUN 30.81	MAY 29.81	922	845	1	98.0	0	19017	2	1	81	A	
JUL 31.81	JUN 30.81	900	900	1	124.0	0	19033	2	1	81	ACD	
AUG 31.81	JUL 31.81	850	900	1	87.9	9	19049	2	1	33	A	N
SEP 30.81	AUG 31.81	915	855	1	120.0	0	19068	2	1	90	C	
OCT 30.81	SEP 30.81	910	900	1	99.0	0	19084	2	1	79	AC	
NOV 30.81	OCT 30.81	920	913	1	22.0	0	19106	2	1	76	A	
JAN 5.82	NOV 30.81	910	825	3	76.0	0	19124	2	1	***	CHG	

REMOVAL DATE	EXPOSURE DATE		VOLUME ML	CONDUCT. UMHO/CM		PH LAB	TOTAL H+ TO PH4.3 MG/L	SULPHATE MG/L		NITRATE AS N MG/L		CALCIUM MG/L
SEP 30.80	SEP 2.80		1445.0	49.5		4.02	0.1326	6.65		0.74		0.51
OCT 31.80	SEP 30.80		1075.0	28.6		4.43	0.0776	4.00		0.55		0.84
NOV 28.80	OCT 31.80	U	310.0	32.4		4.44	0.0926	4.65		0.46	U	1.14
DEC 31.80	NOV 28.80	U	355.0	27.3		4.24	0.0928	2.40		0.49		0.33
JAN 30.81	DEC 31.80		370.0	65.0		3.98	0.1058	4.75		1.27		0.69
FEB 27.81	JAN 30.81		1465.0	28.6		4.22	0.0932	2.65		0.42		0.22
MAR 31.81	FEB 27.81	U	120.0	*****	U	6.21	******	8.05		1.15		*****
APR 30.81	MAR 31.81		2325.0	45.1		4.14	0.1170	5.35		0.72		0.43
MAY 29.81	APR 30.81		1240.0	72.0		3.85	0.1908	8.80	U	0.10		0.68
JUN 30.81	MAY 29.81		2580.0	34.8		4.29	0.0912	4.15		0.52		0.35
JUL 31.81	JUN 30.81		3415.0	54.0		3.97	0.1428	5.55		0.61		0.28
AUG 31.81	JUL 31.81	U	945.0	82.0		3.79	0.1914	10.50		1.01	U	1.24
SEP 30.81	AUG 31.81		3530.0	37.0		4.11	0.1048	4.70		0.69		0.40
OCT 30.81	SEP 30.81		2543.0	44.3		4.04	0.1220	5.20		0.62		0.44
NOV 30.81	OCT 30.81		550.0	37.4		4.28	0.1052	4.15		0.71		0.42
JAN 5.82	NOV 30.81		2004.0	24.5		4.14	0.0964	2.50		0.51		0.55

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : COLCHESTER/CUMULATIVE/WET #01

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
SEP 30.80	SEP 2.80	0.23	1.15	0.105	0.070	0.040	0.980	0.010
OCT 31.80	SEP 30.80	0.25	1.02	0.155	0.060	0.070	0.690	0.029
NOV 28.80	OCT 31.80	0.37	1.48	0.230	0.080	0.090	1.020	0.017
DEC 31.80	NOV 28.80	0.34	0.81	0.100	< 0.010	U 0.150	0.292	0.010
JAN 30.81	DEC 31.80	1.27	0.84	0.170	0.070	0.580	0.590	0.024
FEB 27.81	JAN 30.81	0.20	0.30	0.050	0.010	0.090	0.244	0.003
MAR 31.81	FEB 27.81	0.87	*****	*****	*****	*****	2.080	*****
APR 30.81	MAR 31.81	0.29	0.80	0.145	0.050	0.150	0.620	0.016
MAY 29.81	APR 30.81	0.35	1.20	0.200	0.080	0.100	0.890	0.018
JUN 30.81	MAY 29.81	0.18	0.80	0.090	0.050	0.050	0.610	0.018
JUL 31.81	JUN 30.81	0.17	0.60	0.070	0.020	0.040	0.550	0.003
AUG 31.81	JUL 31.81	0.39	U 1.18	U 0.330	0.100	0.050	U 1.030	0.032
SEP 30.81	AUG 31.81	0.04	0.39	0.105	U 0.220	0.020	0.170	0.008
OCT 30.81	SEP 30.81	0.16	0.62	U 0.165	0.120	U 0.060	0.400	0.062
NOV 30.81	OCT 30.81	0.37	0.85	0.150	0.130	0.160	0.610	0.038
JAN 5.82	NOV 30.81	0.31	0.30	0.130	0.120	0.140	0.214	0.035

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINUM MG/L
SEP 30.80	SEP 2.80	0.004	0.002	0.018	0.049	0.011	< 0.002	0.039
OCT 31.80	SEP 30.80	0.005	< 0.001	0.034	0.092	0.004	< 0.002	0.048
NOV 28.80	OCT 31.80	*****	*****	*****	*****	*****	*****	*****
DEC 31.80	NOV 28.80	*****	*****	*****	*****	*****	*****	*****
JAN 30.81	DEC 31.80	*****	*****	*****	*****	*****	*****	*****
FEB 27.81	JAN 30.81	0.003	U 0.011	0.016	0.023	0.011	< 0.002	0.023
MAR 31.81	FEB 27.81	*****	*****	*****	*****	*****	*****	*****
APR 30.81	MAR 31.81	0.006	< 0.001	0.007	0.116	0.008	< 0.002	0.102
MAY 29.81	APR 30.81	0.006	< 0.001	0.029	0.125	U 0.019	< 0.005	0.085
JUN 30.81	MAY 29.81	0.004	< 0.001	L 0.005	L 0.025	0.006	< 0.002	L 0.021
JUL 31.81	JUN 30.81	0.003	< 0.001	0.005	0.079	0.009	< 0.002	0.072
AUG 31.81	JUL 31.81	0.008	< 0.001	0.018	0.101	0.013	< 0.002	0.089
SEP 30.81	AUG 31.81	0.003	< 0.001	0.007	0.022	0.010	< 0.002	0.014
OCT 30.81	SEP 30.81	0.007	< 0.001	0.020	0.097	U 0.018	< 0.002	0.056
NOV 30.81	OCT 30.81	0.007	0.002	0.035	0.043	0.016	< 0.002	0.023
JAN 5.82	NOV 30.81	0.005	< 0.001	0.021	0.057	0.012	< 0.002	0.035

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : COLCHESTER/CUMULATIVE/WET #01

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM MG/L	FREE H+ MG/L
SEP 30.80	SEP 2.80	0.001	0.0001	0.0955
OCT 31.80	SEP 30.80	0.004	< 0.0001	0.0372
NOV 28.80	OCT 31.80	*****	******	0.0363
DEC 31.80	NOV 28.80	*****	******	0.0575
JAN 30.81	DEC 31.80	*****	******	0.1047
FEB 27.81	JAN 30.81	0.003	0.0004	0.0603
MAR 31.81	FEB 27.81	*****	******	U 0.0006
APR 30.81	MAR 31.81	0.011	< 0.0001	0.0724
MAY 29.81	APR 30.81	0.007	0.0002	0.1413
JUN 30.81	MAY 29.81	L< 0.001	< 0.0001	0.0513
JUL 31.81	JUN 30.81	0.001	< 0.0001	0.1072
AUG 31.81	JUL 31.81	0.007	0.0003	0.1622
SEP 30.81	AUG 31.81	0.003	0.0002	0.0776
OCT 30.81	SEP 30.81	0.002	0.0002	0.0912
NOV 30.81	OCT 30.81	0.003	0.0007	0.0525
JAN 5.82	NOV 30.81	0.005	0.0004	0.0417

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : HURON PARK/CUMULATIVE/WET #06 PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 09-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
OCT 30.81	OCT 2.81	830	900	3	121.3	1	19104	2	1	67		
NOV 29.81	OCT 30.81	****	****	*	65.9	9	38018	2	1	***		X
DEC 31.81	NOV 28.81	****	****	*	113.4	9	38020	2	1	***		X

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
OCT 30.81	OCT 2.81	2672.0	24.5	4.39	0.0754	2.50	0.40	0.24
NOV 29.81	OCT 30.81	******	*****	*****	******	*****	*****	*****
DEC 31.81	NOV 28.81	******	*****	*****	******	*****	*****	*****

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
OCT 30.81	OCT 2.81	0.08	0.37	0.025	0.020	0.020	0.356	0.008
NOV 29.81	OCT 30.81	*****	*****	*****	*****	*****	*****	*****
DEC 31.81	NOV 28.81	*****	*****	*****	*****	*****	*****	*****

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINUM MG/L
OCT 30.81	OCT 2.81	0.002	< 0.001	0.006	0.029	0.007	< 0.002	U 0.105
NOV 29.81	OCT 30.81	*****	*****	*****	*****	*****	*****	*****
DEC 31.81	NOV 28.81	*****	*****	*****	*****	*****	*****	*****

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : HURON PARK/CUMULATIVE/WET #06

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM MG/L	FREE H+ MG/L
OCT 30.81	OCT 2.81	0.012	0.0001	0.0407
NOV 28.81	OCT 30.81	*****	******	******
DEC 31.81	NOV 28.81	*****	******	******

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MERLIN/CUMULATIVE/WET *02 PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 09-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
SEP 30.80	SEP 2.80	855	900	1	87.6	9	724	2	1	6		N
OCT 31.80	SEP 30.80	800	730	1	54.4	9	725	2	1	59		
NOV 28.80	OCT 31.80	730	730	1	24.5	9	727	2	1	54		H
DEC 31.80	NOV 28.80	730	900	4	50.0	0	728	2	1	68		
JAN 30.81	DEC 31.80	900	730	4	13.0	0	729	2	1	10		N
FEB 27.81	JAN 30.81	730	730	1	80.0	0	730	2	1	54	FH	
MAR 31.81	FEB 27.81	730	730	1	15.0	0	1959	2	1	82		H
APR 30.81	MAR 31.81	730	730	1	93.0	0	1896	2	1	73		
MAY 29.81	APR 30.81	730	1215	1	54.6	9	12008	2	1	79	CD	
JUN 30.81	MAY 29.81	1215	900	1	141.6	9	19019	2	1	54	C	
JUL 31.81	JUN 30.81	900	800	1	88.0	0	19035	2	1	58	L	
AUG 31.81	JUL 31.81	800	800	1	52.0	0	19051	2	1	113		
SEP 30.81	AUG 31.81	900	900	1	60.0	0	19070	2	1	112	A	
OCT 30.81	SEP 30.81	900	900	1	140.0	0	19088	2	1	82	A	
NOV 30.81	OCT 30.81	900	900	3	27.0	0	19108	2	1	80	AC	
JAN 5.82	NOV 30.81	900	700	2	80.0	0	19128	2	1	***	GHC	N

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
SEP 30.80	SEP 2.80	U 190.0	*****	U 5.01	0.0798	U 15.50	U 1.48	*****
OCT 31.80	SEP 30.80	1049.0	29.3	4.34	0.0806	3.98	0.59	0.66
NOV 28.80	OCT 31.80	430.0	34.0	U 5.33	0.0522	3.45	1.24	U 2.35
DEC 31.80	NOV 28.80	1120.0	28.0	4.28	0.1020	2.95	0.61	0.70
JAN 30.81	DEC 31.80	U 45.0	*****	4.19	******	6.35	1.34	*****
FEB 27.81	JAN 30.81	1405.0	16.8	4.27	0.0976	4.10	0.77	0.86
MAR 31.81	FEB 27.81	400.0	41.0	U 5.97	0.0448	8.80	1.51	U 2.25
APR 30.81	MAR 31.81	2205.0	45.0	4.15	0.1166	5.35	0.80	0.79
MAY 29.81	APR 30.81	1410.0	64.0	3.93	0.1646	7.70	0.95	0.81
JUN 30.81	MAY 29.81	2490.0	35.9	4.16	0.1010	3.90	0.44	0.22
JUL 31.81	JUN 30.81	1685.0	46.8	4.08	0.1196	5.25	0.56	0.30
AUG 31.81	JUL 31.81	1920.0	65.0	3.89	0.1554	6.90	0.81	0.48
SEP 30.81	AUG 31.81	2200.0	33.0	4.31	0.0792	4.20	0.57	0.49
OCT 30.81	SEP 30.81	3766.0	40.0	4.10	0.1092	4.15	0.48	0.35
NOV 30.81	OCT 30.81	704.0	29.5	4.43	0.0766	3.55	0.61	0.63
JAN 5.82	NOV 30.81	U 450.0	15.4	U 5.83	0.0392	3.00	0.44	U 1.41

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MERLIN/CUMULATIVE/WET #02

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
SEP 30.80	SEP 2.80	U 5.30	*****	*****	*****	*****	U 2.980	*****
OCT 31.80	SEP 30.80	0.19	0.95	0.122	0.050	0.040	0.590	0.011
NOV 28.80	OCT 31.80	0.47	1.88	U 0.485	0.130	0.130	1.170	U 0.650
DEC 31.80	NOV 28.80	0.28	0.66	0.135	0.010	0.120	0.348	0.009
JAN 30.81	DEC 31.80	1.04	*****	*****	*****	*****	*****	*****
FEB 27.81	JAN 30.81	0.52	0.66	U 0.190	0.050	0.340	0.390	0.029
MAR 31.81	FEB 27.81	0.66	2.62	U 0.445	0.100	0.360	2.050	0.017
APR 30.81	MAR 31.81	0.27	0.86	0.140	0.080	0.160	0.660	0.018
MAY 29.81	APR 30.81	0.31	0.93	0.170	0.140	0.050	1.000	0.009
JUN 30.81	MAY 29.81	0.14	0.60	0.040	0.050	0.050	0.450	0.008
JUL 31.81	JUN 30.81	0.14	0.68	0.065	0.020	0.010	0.650	0.003
AUG 31.81	JUL 31.81	0.26	0.75	0.125	0.110	0.020	0.560	0.012
SEP 30.81	AUG 31.81	0.08	0.94	0.100	0.100	0.030	0.730	0.041
OCT 30.81	SEP 30.81	0.12	0.40	0.040	0.040	0.020	0.350	0.013
NOV 30.81	OCT 30.81	0.29	0.72	0.125	0.110	0.110	0.520	0.070
JAN 5.82	NOV 30.81	0.26	0.32	0.360	0.060	0.110	0.130	0.045

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINUM MG/L
SEP 30.80	SEP 2.80	*****	*****	*****	*****	*****	*****	*****
OCT 31.80	SEP 30.80	0.003	< 0.001	0.024	0.048	0.011	< 0.002	0.026
NOV 28.80	OCT 31.80	*****	*****	*****	*****	*****	*****	*****
DEC 31.80	NOV 28.80	0.005	< 0.001	< 0.010	0.102	0.008	< 0.002	0.076
JAN 30.81	DEC 31.80	*****	*****	*****	*****	*****	*****	*****
FEB 27.81	JAN 30.81	U 0.012	0.002	0.004	0.062	0.009	< 0.002	U 0.255
MAR 31.81	FEB 27.81	*****	*****	*****	*****	*****	*****	*****
APR 30.81	MAR 31.81	0.006	< 0.001	0.009	0.148	0.004	< 0.002	0.139
MAY 29.81	APR 30.81	0.005	< 0.001	0.010	0.046	0.010	< 0.002	0.039
JUN 30.81	MAY 29.81	0.002	0.002	L 0.004	L 0.025	0.005	< 0.002	L 0.012
JUL 31.81	JUN 30.81	0.003	< 0.001	0.009	0.047	0.008	< 0.002	0.059
AUG 31.81	JUL 31.81	0.006	< 0.001	0.011	0.049	0.010	< 0.002	0.058
SEP 30.81	AUG 31.81	0.004	0.004	0.008	0.038	0.009	< 0.002	0.027
OCT 30.81	SEP 30.81	0.003	< 0.001	0.005	0.045	0.010	< 0.002	0.029
NOV 30.81	OCT 30.81	0.005	0.002	0.020	0.076	0.013	< 0.002	0.059
JAN 5.82	NOV 30.81	*****	*****	*****	*****	*****	*****	*****

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MERLIN/CUMULATIVE/WET #02

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM MG/L	FREE H+ MG/L
SEP 30.80	SEP 2.80	*****	******	U 0.0010
OCT 31.80	SEP 30.80	0.003	0.0004	0.0457
NOV 28.80	OCT 31.80	*****	******	U 0.0047
DEC 31.80	NOV 28.80	0.003	< 0.0001	0.0525
JAN 30.81	DEC 31.80	*****	******	0.0645
FEB 27.81	JAN 30.81	0.002	0.0003	0.0537
MAR 31.81	FEB 27.81	*****	******	U 0.0011
APR 30.81	MAR 31.81	0.008	0.0002	0.0708
MAY 29.81	APR 30.81	0.003	0.0002	0.1175
JUN 30.81	MAY 29.81	L 0.001	< 0.0001	0.0692
JUL 31.81	JUN 30.81	0.001	0.0001	0.0832
AUG 31.81	JUL 31.81	0.003	0.0002	0.1288
SEP 30.81	AUG 31.81	0.002	0.0004	0.0490
OCT 30.81	SEP 30.81	0.003	0.0002	0.0794
NOV 30.81	OCT 30.81	L 0.002	0.0001	0.0372
JAN 5.82	NOV 30.81	*****	******	U 0.0015

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PALMERSTON/CUMULATIVE/WET #08

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 04-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
SEP 30.80	SEP 2.80	900	905	1	106.7	9	754	2	1	***	G	NH
OCT 31.80	SEP 30.80	****	855	3	113.5	9	755	2	1	68	FA	H
NOV 28.80	OCT 31.80	855	1400	3	42.9	9	756	2	1	49	A	NH
DEC 31.80	NOV 28.80	1400	1100	3	17.0	0	757	2	1	41	FI	N
JAN 30.81	DEC 31.80	1100	1000	3	24.0	0	758	2	1	27	FI	N
FEB 27.81	JAN 30.81	1100	1100	4	82.0	0	759	2	1	24		N
APR 1.81	FEB 27.81	1100	1100	1	17.0	0	1954	2	1	81		H
APR 30.81	APR 2.81	905	845	1	71.0	0	1898	2	1	59	D	
MAY 30.81	APR 30.81	910	900	1	79.5	9	19015	2	1	70		
JUL 1.81	MAY 30.81	905	850	1	77.1	9	19031	2	1	74	C	
JUL 31.81	JUL 1.81	900	905	1	37.0	0	19045	2	1	***	G	
SEP 1.81	JUL 31.81	900	910	1	132.0	0	19065	2	1	***	CG	
SEP 30.81	SEP 1.81	920	1015	1	75.0	9	19082	2	1	36	IACM	N
OCT 31.81	SEP 30.81	900	900	1	113.8	9	19100	2	1	54		
NOV 30.81	OCT 30.81	900	900	1	43.0	0	19120	2	1	87		
JAN 5.82	NOV 30.81	900	1350	2	64.0	0	19140	2	1	36		N

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
SEP 30.80	SEP 2.80	U 1705.0	21.3	U 6.60	0.0440	3.35	0.45	U 2.00
OCT 31.80	SEP 30.80	2515.0	17.7	5.07	0.0572	4.50	0.52	0.64
NOV 28.80	OCT 31.80	U 695.0	37.0	4.41	0.0940	5.05	1.22	1.09
DEC 31.80	NOV 28.80	U 1045.0	29.0	4.30	0.0890	2.90	0.69	0.32
JAN 30.81	DEC 31.80	U 215.0	*****	4.38	******	2.90	0.77	0.34
FEB 27.81	JAN 30.81	U 645.0	32.6	4.25	0.0910	3.50	0.55	0.21
APR 1.81	FEB 27.81	450.0	24.5	U 5.78	0.0336	4.95	0.66	U 1.62
APR 30.81	APR 2.81	1365.0	29.4	4.56	0.0662	4.50	0.78	0.82
MAY 30.81	APR 30.81	1820.0	55.0	4.08	0.1360	4.70	0.82	0.49
JUL 1.81	MAY 30.81	1870.0	24.5	4.40	0.0707	3.30	0.45	0.25
JUL 31.81	JUL 1.81	785.0	43.5	4.11	0.1140	5.05	0.49	0.24
SEP 1.81	JUL 31.81	A 3450.0	45.4	U 4.14	0.1014	5.40	0.60	U 1.12
SEP 30.81	SEP 1.81	U 890.0	31.0	4.32	0.0790	4.20	0.44	0.61
OCT 31.81	SEP 30.81	2032.0	23.2	4.35	0.0780	2.50	0.36	0.33
NOV 30.81	OCT 30.81	1222.0	22.8	4.47	0.0690	2.70	0.41	0.29
JAN 5.82	NOV 30.81	U 764.0	31.4	U 5.76	0.0454	4.40	U 1.19	U 1.58

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PALMERSTON/CUMULATIVE/WET #08

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
SEP 30.80	SEP 2.80	0.47	1.13	0.120	U 0.220	U 0.340	0.630	0.024
OCT 31.80	SEP 30.80	0.15	1.17	0.140	0.060	0.040	0.930	0.027
NOV 28.80	OCT 31.80	0.10	1.98	0.195	U 0.500	0.110	1.350	0.110
DEC 31.80	NOV 28.80	0.25	0.83	0.110	0.030	0.120	0.620	0.004
JAN 30.81	DEC 31.80	0.51	*****	0.110	0.090	0.240	0.660	*****
FEB 27.81	JAN 30.81	0.21	0.85	0.050	0.040	0.120	0.670	0.005
APR 1.81	FEB 27.81	0.29	1.82	U 0.575	0.070	0.160	1.250	0.042
APR 30.81	APR 2.81	0.23	1.10	0.175	0.050	0.100	0.970	0.018
MAY 30.81	APR 30.81	0.24	1.18	0.140	0.050	0.060	1.090	0.011
JUL 1.81	MAY 30.81	0.09	1.02	0.050	0.010	< 0.010	0.750	0.015
JUL 31.81	JUL 1.81	0.10	0.81	0.060	0.030	0.300	0.680	0.007
SEP 1.81	JUL 31.81	0.40	0.83	0.200	0.150	0.220	0.640	0.022
SEP 30.81	SEP 1.81	0.07	0.65	0.120	0.050	0.030	0.550	0.018
OCT 30.81	SEP 30.81	0.08	0.38	0.060	0.040	0.020	0.350	0.014
NOV 30.81	OCT 30.81	0.08	0.64	0.065	0.050	0.070	0.490	0.010
JAN 5.82	NOV 30.81	U 1.64	U 1.02	U 0.525	0.070	U 1.150	0.930	0.060

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINUM MG/L
SEP 30.80	SEP 2.80	0.003	0.002	0.039	0.035	0.005	< 0.002	0.088
OCT 31.80	SEP 30.80	0.005	0.001	0.013	0.038	0.014	< 0.002	0.036
NOV 28.80	OCT 31.80	0.011	< 0.001	0.021	0.118	0.014	< 0.002	0.099
DEC 31.80	NOV 28.80	0.004	0.001	0.020	0.040	0.013	< 0.002	0.031
JAN 30.81	DEC 31.80	*****	*****	*****	*****	*****	*****	*****
FEB 27.81	JAN 30.81	0.003	0.001	0.010	0.021	0.010	< 0.002	0.019
APR 1.81	FEB 27.81	*****	*****	*****	*****	*****	*****	*****
APR 30.81	APR 2.81	0.007	< 0.001	0.009	0.100	0.002	< 0.002	0.127
MAY 30.81	APR 30.81	0.003	< 0.001	0.007	0.056	0.008	< 0.002	0.047
JUL 1.81	MAY 30.81	0.002	< 0.001	L 0.003	L 0.015	0.004	< 0.002	L 0.012
JUL 31.81	JUL 1.81	0.006	< 0.001	0.004	0.036	0.006	< 0.002	0.026
SEP 1.81	JUL 31.81	0.007	0.004	0.038	0.099	0.015	< 0.002	0.056
SEP 30.81	SEP 1.81	0.004	< 0.001	0.007	U 0.118	0.009	< 0.002	0.051
OCT 30.81	SEP 30.81	0.003	< 0.001	0.015	0.037	0.004	< 0.002	0.025
NOV 30.81	OCT 30.81	0.002	< 0.001	0.011	0.033	0.008	< 0.002	0.029
JAN 5.82	NOV 30.81	0.013	< 0.001	0.014	0.107	U 0.029	< 0.002	0.066

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PALMERSTON/CUMULATIVE/WET #08

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM UG/L	FREE H+ UG/L
SEP 30.80	SEP 2.80	0.003	0.0003	U 0.0003
OCT 31.80	SEP 30.80	0.010	< 0.0001	0.0085
NOV 28.80	OCT 31.80	0.004	< 0.0001	0.0389
DEC 31.80	NOV 28.80	0.004	< 0.0001	0.0501
JAN 30.81	DEC 31.80	*****	******	0.0417
FEB 27.81	JAN 30.81	0.005	0.0004	0.0550
APR 1.81	FEB 27.81	*****	******	U 0.0002
APR 30.81	APR 2.81	0.010	0.0002	0.0275
MAY 30.81	APR 30.81	0.003	0.0001	0.0832
JUL 1.81	MAY 30.81	L< 0.001	< 0.0001	0.0398
JUL 31.81	JUL 1.81	0.002	< 0.0001	0.0776
SEP 1.81	JUL 31.81	U 0.022	U 0.0016	U 0.0724
SEP 30.81	SEP 1.81	0.005	0.0001	0.0479
OCT 30.81	SEP 30.81	0.007	0.0005	0.0447
NOV 30.81	OCT 30.81	< 0.002	0.0002	0.0339
JAN 5.82	NOV 30.81	0.006	0.0004	U 0.0017

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PORT STANLEY/CUMULATIVE/WET #03

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 09-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 07-AES 04-ON HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
SEP 30.80	SEP 2.80	1600	900	1	82.7	9	731	2	1	57	CD	
OCT 31.80	SEP 30.80	900	900	1	98.0	9	732	2	1	71	D	
NOV 28.80	OCT 31.80	900	900	3	40.5	9	733	2	1	***	ADG	N
DEC 31.80	NOV 28.80	900	900	3	45.0	0	734	2	1	62	FJ	
JAN 30.81	DEC 31.80	900	900	2	24.6	9	735	2	1	***	CE	
FEB 27.81	JAN 30.81	900	900	3	53.0	0	736	2	1	79	C	
MAR 31.81	FEB 27.81	900	900	3	15.0	0	1958	2	1	110	AC	
APR 30.81	MAR 31.81	900	1400	1	117.0	0	1900	2	1	1	ADHI	N
MAY 29.81	APR 30.81	1400	845	1	38.0	0	13005	2	1	60	A	C
JUN 30.81	MAY 29.81	900	930	1	121.0	0	14021	2	1	80	ACIM	
JUL 31.81	JUN 30.81	930	900	1	39.0	0	19037	2	1	54	C	
AUG 31.81	JUL 31.81	900	900	1	86.0	9	19053	2	1	***	ACG	N
SEP 30.81	AUG 31.81	900	1300	1	82.0	0	19072	2	1	117	ACO	
OCT 30.81	SEP 30.81	1300	900	1	103.0	0	19090	2	1	100		
NOV 30.81	OCT 30.81	900	900	1	29.0	0	19110	2	1	98	D	
JAN 5.82	NOV 30.81	900	900	3	63.0	0	19130	2	1	***	CDG	HC

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH LAB	TOTAL H+ TO PH4.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
SEP 30.80	SEP 2.80	1545.0	34.3	4.22	0.1018	4.40	0.63	U 0.75
OCT 31.80	SEP 30.80	2265.0	22.1	4.46	0.0642	2.85	0.47	0.65
NOV 28.80	OCT 31.80	U 100.0	*****	4.81	******	8.60	1.75	*****
DEC 31.80	NOV 28.80	910.0	22.1	4.38	0.0986	2.05	0.53	0.17
JAN 30.81	DEC 31.80	******	*****	*****	******	*****	*****	*****
FEB 27.81	JAN 30.81	1375.0	19.2	4.10	0.1226	3.40	0.58	0.31
MAR 31.81	FEB 27.81	540.0	45.5	4.35	0.1020	7.15	1.52	U 1.77
APR 30.81	MAR 31.81	U 50.0	*****	U 5.17	******	5.20	0.91	*****
MAY 29.81	APR 30.81	750.0	62.5	3.88	0.1904	9.05	1.06	0.82
JUN 30.81	MAY 29.81	3160.0	40.8	4.11	0.1114	4.55	0.59	0.35
JUL 31.81	JUN 30.81	685.0	52.5	3.99	0.1368	5.70	0.63	0.30
AUG 31.81	JUL 31.81	U 575.0	48.3	4.00	0.1284	4.95	0.66	0.39
SEP 30.81	AUG 31.81	3120.0	49.3	3.99	0.1304	4.65	0.74	0.34
OCT 30.81	SEP 30.81	3364.0	32.7	4.15	0.1002	3.10	0.41	0.25
NOV 30.81	OCT 30.81	923.0	27.1	4.34	0.0840	2.90	0.47	0.34
JAN 5.82	NOV 30.81	1221.0	15.4	U 6.46	0.0346	2.00	0.33	U 1.39

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIDS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PORT STANLEY/CUMULATIVE/WET #03

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
SEP 30.80	SEP 2.80	0.19	0.74	0.130	0.070	U 0.070	0.580	0.003
OCT 31.80	SEP 30.80	0.44	0.53	0.120	0.030	0.070	0.380	0.008
NOV 28.80	OCT 31.80	0.18	*****	*****	*****	*****	*****	*****
DEC 31.80	NOV 28.80	0.25	0.50	0.085	U 0.020	0.120	0.336	0.012
JAN 30.81	DEC 31.80	*****	*****	*****	*****	*****	*****	*****
FEB 27.81	JAN 30.81	0.26	0.42	0.050	0.010	0.120	0.300	0.004
MAR 31.81	FEB 27.81	0.67	1.76	0.335	0.120	0.310	1.490	0.033
APR 30.81	MAR 31.81	0.29	*****	*****	*****	*****	*****	*****
MAY 29.81	APR 30.81	0.35	1.22	0.170	0.130	0.100	1.010	0.030
JUN 30.81	MAY 29.81	0.14	0.82	0.060	0.050	0.080	0.600	0.025
JUL 31.81	JUN 30.81	0.13	0.70	0.060	0.020	0.010	0.600	0.005
AUG 31.81	JUL 31.81	0.17	0.75	0.070	0.040	0.020	0.520	0.022
SEP 30.81	AUG 31.81	0.07	0.61	0.055	0.040	0.020	0.490	0.013
OCT 30.81	SEP 30.81	0.09	0.31	0.020	0.030	0.020	0.282	0.010
NOV 30.81	OCT 30.81	0.13	0.45	0.065	0.030	0.080	0.358	0.009
JAN 5.82	NOV 30.81	0.22	0.85	0.290	0.060	0.110	0.168	0.052

REMOVAL DATE	EXPOSURE DATE	MANGANESE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINIUM MG/L
SEP 30.80	SEP 2.80	0.005	0.005	U 0.070	0.083	0.004	< 0.002	0.048
OCT 31.80	SEP 30.80	0.002	< 0.001	0.013	0.070	0.001	< 0.002	0.046
NOV 28.80	OCT 31.80	*****	*****	*****	*****	*****	*****	*****
DEC 31.80	NOV 28.80	0.012	< 0.001	0.011	0.143	0.010	< 0.002	0.162
JAN 30.81	DEC 31.80	*****	*****	*****	*****	*****	*****	*****
FEB 27.81	JAN 30.81	0.006	< 0.001	0.005	0.046	0.004	< 0.002	0.046
MAR 31.81	FEB 27.81	U 0.030	0.003	0.042	U 0.504	0.022	< 0.002	0.493
APR 30.81	MAR 31.81	*****	*****	*****	*****	*****	*****	*****
MAY 29.81	APR 30.81	0.012	< 0.001	0.015	U 0.250	0.009	< 0.002	U 0.268
JUN 30.81	MAY 29.81	0.004	< 0.001	L 0.012	L 0.021	0.007	< 0.002	L< 0.005
JUL 31.81	JUN 30.81	0.003	< 0.001	0.007	0.043	0.004	< 0.002	0.059
AUG 31.81	JUL 31.81	0.006	< 0.001	0.004	0.108	0.008	< 0.002	0.075
SEP 30.81	AUG 31.81	0.004	< 0.001	0.007	0.032	0.011	< 0.002	0.035
OCT 30.81	SEP 30.81	0.002	< 0.001	0.005	0.038	0.009	< 0.002	0.019
NOV 30.81	OCT 30.81	0.003	< 0.001	0.015	0.040	0.004	< 0.002	0.035
JAN 5.82	NOV 30.81	0.009	< 0.001	0.021	0.041	0.002	< 0.002	0.074

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PORT STANLEY/CUMULATIVE/WET #03 PAGE : 3

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM MG/L	FREE H+ MG/L
SEP 30.80	SEP 2.80	0.005	0.0010	0.0603
OCT 31.80	SEP 30.80	0.005	< 0.0001	0.0347
NOV 28.80	OCT 31.80	*****	******	0.0155
DEC 31.80	NOV 28.80	0.002	< 0.0001	0.0417
JAN 30.81	DEC 31.80	*****	******	******
FEB 27.81	JAN 30.81	0.001	0.0003	0.0794
MAR 31.81	FEB 27.81	0.008	0.0006	0.0447
APR 30.81	MAR 31.81	*****	******	U 0.0007
MAY 29.81	APR 30.81	0.010	0.0005	0.1318
JUN 30.81	MAY 29.81	L 0.003	0.0004	0.0776
JUL 31.81	JUN 30.81	0.003	< 0.0001	0.1023
AUG 31.81	JUL 31.81	0.004	0.0002	0.1000
SEP 30.81	AUG 31.81	0.003	< 0.0001	0.1023
OCT 30.81	SEP 30.81	0.003	0.0001	0.0708
NOV 30.81	OCT 30.81	0.003	0.0002	0.0457
JAN 5.82	NOV 30.81	0.004	0.0006	U 0.0003

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SHALLOW LAKE/CUMULATIVE/WET #09

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 09-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
OCT 31.80	SEP 30.80	800	800	1	87.3	9	749	2	1	***	GFJ	
NOV 29.80	OCT 31.80	900	830	4	72.0	9	750	2	1	53	F	
DEC 31.80	NOV 28.80	900	1100	3	177.9	9	751	2	1	***	GI	X
JAN 30.81	DEC 30.80	1100	830	4	19.0	0	752	2	1	76		
FEB 27.81	JAN 30.81	900	830	4	115.0	0	753	2	1	46		N
MAR 31.81	FEB 27.81	830	815	1	56.0	0	1955	2	1	61	AC	C
APR 30.81	MAR 31.81	815	800	1	71.0	0	1895	2	1	5	ACHI	N
MAY 29.81	APR 30.81	815	815	1	41.0	0	19011	2	1	111	JNAF	H
JUN 30.81	MAY 29.81	830	815	1	100.0	0	19027	2	1	102	C	
JUL 31.81	JUN 30.81	815	815	1	15.0	0	19043	2	1	185		N
AUG 31.81	JUL 31.81	815	830	1	84.0	0	19059	2	1	96	RC	
SEP 30.81	AUG 31.81	830	930	1	91.0	0	19079	2	1	***	CGH	N
OCT 30.81	SEP 30.81	930	900	1	60.0	0	19096	2	1	96	CI	
NOV 30.81	OCT 30.81	900	900	4	79.3	9	19115	2	1	***	GCD	
JAN 6.82	NOV 30.81	900	830	3	72.0	0	19136	2	1	79	C	

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
OCT 31.80	SEP 30.80	2198.0	20.0	4.48	0.0692	2.60	0.40	0.39
NOV 29.80	OCT 31.80	1240.0	27.5	4.43	0.0856	3.40	0.84	0.44
DEC 31.80	NOV 28.80	******	*****	*****	******	*****	*****	*****
JAN 30.81	DEC 30.80	475.0	35.0	4.20	0.0964	2.55	0.85	0.18
FEB 27.81	JAN 30.81	U 1720.0	24.3	4.31	0.0776	1.95	0.44	0.08
MAR 31.81	FEB 27.81	1115.0	25.6	4.32	J 0.0850	4.00	0.56	0.50
APR 30.81	MAR 31.81	U 130.0	*****	U 5.93	******	U 11.00	1.00	*****
MAY 29.81	APR 30.81	1490.0	28.7	U 6.24	0.0529	5.75	0.53	0.30
JUN 30.81	MAY 29.81	1340.0	29.5	4.26	0.0998	3.50	0.46	0.26
JUL 31.81	JUN 30.81	905.0	37.1	4.16	0.1044	3.95	0.35	0.22
AUG 31.81	JUL 31.81	2625.0	59.9	3.89	0.1532	6.06	0.52	0.21
SEP 30.81	AUG 31.81	U 650.0	37.5	4.17	0.1060	4.00	0.43	0.20
OCT 30.81	SEP 30.81	1878.0	25.0	4.34	0.0762	2.40	0.36	0.16
NOV 30.81	OCT 30.81	1899.0	20.3	4.56	0.0708	2.40	0.42	0.51
JAN 6.82	NOV 30.81	1853.0	31.4	4.15	0.1034	2.38	0.71	0.18

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SHALLOW LAKE/CUMULATIVE/WET #09

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
OCT 31.80	SEP 30.80	0.04	0.56	0.055	0.020	0.040	0.440	0.006
NOV 28.80	OCT 31.80	0.17	1.45	0.105	0.050	0.070	0.910	0.038
DEC 31.80	NOV 28.80	*****	*****	*****	*****	*****	*****	*****
JAN 30.81	DEC 30.80	0.32	0.52	0.080	0.050	0.200	0.410	< 0.001
FEB 27.81	JAN 30.81	0.10	0.38	0.015	0.010	0.060	0.292	0.011
MAR 31.81	FEB 27.81	0.23	1.00	0.090	0.100	0.110	0.920	0.023
APR 30.81	MAR 31.81	U 1.65	*****	*****	*****	*****	0.480	*****
MAY 29.81	APR 30.81	0.40	U 4.55	0.100	U 0.690	0.160	U 2.050	U 0.430
JUN 30.81	MAY 29.81	0.13	0.68	0.055	0.020	0.050	0.500	0.010
JUL 31.81	JUN 30.81	0.08	0.38	0.050	0.020	0.020	0.310	0.012
AUG 31.81	JUL 31.81	0.16	0.66	0.050	0.040	0.010	0.530	0.012
SEP 30.81	AUG 31.81	0.02	0.68	0.035	0.050	0.020	0.450	0.038
OCT 30.81	SEP 30.81	0.06	0.38	0.015	0.020	0.020	0.316	0.009
NOV 30.81	OCT 30.81	0.14	0.42	0.115	0.050	0.090	0.284	0.011
JAN 5.82	NOV 30.81	0.15	0.46	0.020	0.030	0.040	0.421	0.048

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINUM MG/L
OCT 31.80	SEP 30.80	0.003	< 0.001	0.007	0.031	0.005	< 0.002	0.024
NOV 28.80	OCT 31.80	0.008	< 0.001	0.021	0.055	0.011	< 0.002	0.053
DEC 31.80	NOV 28.80	*****	*****	*****	*****	*****	*****	*****
JAN 30.81	DEC 30.80	0.006	0.001	0.022	0.066	0.009	< 0.002	0.051
FEB 27.81	JAN 30.81	0.002	< 0.001	0.005	0.008	0.004	< 0.002	< 0.008
MAR 31.81	FEB 27.81	0.007	< 0.001	0.013	0.141	0.004	< 0.002	0.096
APR 30.81	MAR 31.81	*****	*****	*****	*****	*****	*****	*****
MAY 29.81	APR 30.81	0.002	< 0.001	0.005	0.037	< 0.001	< 0.002	0.015
JUN 30.81	MAY 29.81	0.003	0.002	L 0.003	L 0.036	0.004	< 0.002	L 0.012
JUL 31.81	JUN 30.81	0.002	< 0.001	0.005	0.018	0.005	< 0.002	0.016
AUG 31.81	JUL 31.81	0.003	< 0.001	0.006	0.030	0.008	< 0.002	0.036
SEP 30.81	AUG 31.81	*****	*****	*****	*****	*****	< 0.002	*****
OCT 30.81	SEP 30.81	0.001	< 0.001	0.005	0.016	0.008	< 0.002	0.022
NOV 30.81	OCT 30.81	0.003	< 0.001	0.023	0.084	0.018	< 0.002	0.060
JAN 5.82	NOV 30.81	0.002	< 0.001	0.009	0.047	0.012	< 0.002	0.023

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SHALLOW LAKE/CUMULATIVE/WET #09

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM MG/L	FREE H+ MG/L
OCT 31.80	SEP 30.80	0.003	0.0002	0.0331
NOV 28.80	OCT 31.80	0.001	< 0.0001	0.0372
DEC 31.80	NOV 28.80	*****	******	******
JAN 30.81	DEC 30.80	0.010	0.0004	0.0631
FEB 27.81	JAN 30.81	0.001	0.0001	0.0490
MAR 31.81	FEB 27.81	0.004	0.0001	0.0479
APR 30.81	MAR 31.81	*****	******	U 0.0001
MAY 29.81	APR 30.81	0.004	0.0002	U 0.0005
JUN 30.81	MAY 29.81	L< 0.001	< 0.0001	0.0550
JUL 31.81	JUN 30.81	0.002	0.0001	0.0692
AUG 31.81	JUL 31.81	0.001	0.0002	0.1288
SEP 30.81	AUG 31.81	L< 0.001	******	0.0676
OCT 30.81	SEP 30.81	0.005	0.0001	0.0457
NOV 30.81	OCT 30.81	0.009	0.0010	0.0275
JAN 5.82	NOV 30.81	0.003	0.0004	0.0708

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : WATERLOO/CUMULATIVE/WET #07

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 09-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
SEP 30.80	SEP 1.80	900	905	1	70.7	9	760	2	1	83		C
OCT 31.80	SEP 30.80	905	830	3	79.9	9	761	2	1	56	F	
NOV 28.80	OCT 31.80	830	850	3	30.5	9	762	2	1	26	FI	N
DEC 31.80	NOV 28.80	850	900	4	82.0	0	763	2	1	66		
JAN 30.81	DEC 31.81	900	1315	4	27.1	9	1961	2	1	50		
FEB 27.81	JAN 30.81	1315	820	3	73.4	9	764	2	1	20		N
MAR 31.81	FEB 27.81	820	825	3	50.0	0	1953	2	1	72	CFJ	H
APR 30.81	MAR 31.81	825	815	1	50.0	0	1894	2	1	68		
MAY 29.81	APR 30.81	815	830	1	36.0	0	19013	2	1	102	A	
JUL 3.81	MAY 29.81	830	1130	1	58.0	0	19029	2	1	108	C	
JUL 31.81	JUN 30.81	1400	1500	1	59.0	0	19047	2	1	115	D	
AUG 31.81	JUL 31.81	1500	1445	1	75.0	0	19063	2	1	85	FJ	
SEP 30.81	AUG 31.81	1445	900	1	73.0	0	19080	2	1	0	H	N
OCT 30.81	SEP 30.81	900	900	1	99.0	0	19098	2	1	95	CD	HN
NOV 30.81	NOV 2.81	930	1630	3	45.0	0	19118	2	1	39	CD	N
JAN 5.82	NOV 30.81	1630	830	3	68.0	0	19142	2	1	50	C	

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
SEP 30.80	SEP 1.80	1915.0	32.0	4.12	0.1014	3.30	0.52	0.24
OCT 31.80	SEP 30.80	1475.0	20.4	4.49	0.0676	2.45	0.44	0.38
NOV 28.80	OCT 31.80	U 260.0	36.0	4.98	0.0754	5.90	1.24	1.15
DEC 31.80	NOV 28.80	1775.0	24.6	4.38	0.0872	2.60	0.61	0.53
JAN 30.81	DEC 31.81	440.0	40.0	4.21	0.1010	3.00	1.07	0.34
FEB 27.81	JAN 30.81.	U 494.0	29.4	4.23	0.0892	2.40	0.45	0.12
MAR 31.81	FEB 27.81	1175.0	22.5	U 6.61	0.0308	4.45	0.72	U 1.72
APR 30.81	MAR 31.81	1115.0	32.4	4.31	0.0920	3.90	0.67	0.49
MAY 29.81	APR 30.81	1200.0	64.5	4.00	0.1624	8.50	U 1.13	0.92
JUL 3.81	MAY 29.81	2040.0	31.6	4.20	0.0962	3.70	0.52	0.30
JUL 31.81	JUN 30.81	2215.0	56.0	3.98	0.1470	5.90	0.66	0.30
AUG 31.81	JUL 31.81	2040.0	74.0	3.85	******	U 10.30	0.99	0.82
SEP 30.81	AUG 31.81	U 20.0	*****	U 5.50	******	*****	*****	*****
OCT 30.81	SEP 30.81	3071.0	21.0	U 6.75	0.0420	2.85	0.40	U 1.25
NOV 30.81	NOV 2.81	U 570.0	21.2	4.88	0.0542	3.25	0.58	0.79
JAN 5.82	NOV 30.81	1106.0	16.6	U 0.0	0.0490	2.75	0.63	0.98

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : WATERLOO/CUMULATIVE/WET #07

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
SEP 30.80	SEP 1.80	0.07	0.78	0.045	0.030	0.020	0.500	0.007
OCT 31.80	SEP 30.80	0.36	0.71	0.055	0.030	0.040	0.560	0.010
NOV 29.80	OCT 31.80	0.38	2.40	0.290	0.140	0.150	U 1.860	0.080
DEC 31.80	NOV 28.80	0.22	0.71	0.110	0.020	0.100	0.490	0.015
JAN 30.81	DEC 31.81	0.79	0.86	0.125	0.060	0.460	0.620	0.010
FEB 27.81	JAN 30.81	0.16	0.42	0.015	0.010	0.080	0.300	0.004
MAR 31.81	FEB 27.81	0.31	1.02	U 0.600	0.040	0.160	0.910	0.023
APR 30.81	MAR 31.81	0.19	0.79	0.095	0.050	0.080	0.660	0.013
MAY 29.81	APR 30.81	U 0.79	1.40	0.330	0.130	U 0.460	1.110	0.222
JUL 3.81	MAY 29.81	0.11	0.68	0.040	0.030	0.020	0.530	0.008
JUL 31.81	JUN 30.81	0.14	0.74	0.055	0.020	0.020	0.590	0.014
AUG 31.81	JUL 31.81	0.29	U 2.62	U 0.260	0.440	0.070	U 1.720	U 0.188
SEP 30.81	AUG 31.81	*****	*****	*****	*****	*****	*****	*****
OCT 30.81	SEP 30.81	0.18	U 1.88	U 0.115	U 0.170	U 0.080	U 1.110	U 0.412
NOV 30.81	NOV 2.81	0.17	0.75	0.240	0.040	0.080	0.600	0.020
JAN 5.82	NOV 30.81	0.27	0.75	0.360	0.070	0.090	0.530	0.038

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINUM MG/L
SEP 30.80	SEP 1.80	0.002	< 0.001	0.011	0.054	0.010	< 0.002	0.023
OCT 31.80	SEP 30.80	0.003	< 0.001	0.011	0.034	0.007	< 0.002	0.013
NOV 28.80	OCT 31.80	*****	*****	*****	*****	*****	*****	*****
DEC 31.80	NOV 28.80	0.007	< 0.001	0.009	0.088	0.010	< 0.002	0.111
JAN 30.81	DEC 31.81	*****	*****	*****	*****	*****	*****	*****
FEB 27.81	JAN 30.81	0.002	0.001	< 0.006	0.063	0.011	< 0.002	0.013
MAR 31.81	FEB 27.81	0.003	< 0.001	0.012	0.054	0.003	< 0.002	0.062
APR 30.81	MAR 31.81	0.006	< 0.001	0.005	0.149	0.005	< 0.002	0.187
MAY 29.81	APR 30.81	0.005	< 0.001	0.008	0.052	0.011	< 0.002	0.067
JUL 3.81	MAY 29.81	0.005	0.003	L 0.005	L 0.037	0.008	< 0.002	L 0.031
JUL 31.81	JUN 30.81	0.004	< 0.001	0.005	0.072	0.011	< 0.002	0.071
AUG 31.81	JUL 31.81	0.006	< 0.001	0.014	0.056	0.009	< 0.002	0.059
SEP 30.81	AUG 31.81	*****	*****	*****	*****	*****	*****	*****
OCT 30.81	SEP 30.81	0.007	< 0.001	0.015	0.059	0.004	< 0.002	0.020
NOV 30.81	NOV 2.81	0.007	< 0.001	0.038	0.133	0.023	< 0.002	0.082
JAN 5.82	NOV 30.81	0.015	< 0.001	U 0.035	U 0.326	0.011	< 0.002	U 0.302

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : WATERLOO/CUMULATIVE/WET #07 PAGE : 3

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM MG/L	FREE H+ MG/L
SEP 30.80	SEP 1.80	0.001	0.0001	0.0759
OCT 31.80	SEP 30.80	0.002	0.0002	0.0324
NOV 28.80	OCT 31.80	*****	******	0.0105
DEC 31.80	NOV 28.80	0.003	< 0.0001	0.0417
JAN 30.81	DEC 31.81	*****	******	0.0617
FEB 27.81	JAN 30.81	0.007	0.0002	0.0589
MAR 31.81	FEB 27.81	0.003	0.0001	U 0.0002
APR 30.81	MAR 31.81	0.011	0.0003	0.0490
MAY 29.81	APR 30.81	0.003	0.0001	0.1000
JUL 3.81	MAY 29.81	L 0.001	< 0.0001	0.0631
JUL 31.81	JUN 30.81	0.002	< 0.0001	0.1047
AUG 31.81	JUL 31.81	0.005	0.0003	0.1413
SEP 30.81	AUG 31.81	*****	******	U 0.0003
OCT 30.81	SEP 30.81	0.010	0.0002	U 0.0002
NOV 30.81	NOV 2.81	0.005	0.0020	0.0132
JAN 5.82	NOV 30.81	< 0.002	0.0002	U ******

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : WILKESPORT/CUMULATIVE/WET #04

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 09-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
SEP 30.80	SEP 3.80	900	845	1	74.0	9	737	2	1	74		
OCT 31.80	SEP 30.80	900	1040	1	60.4	9	738	2	1	76		
NOV 28.80	OCT 31.80	1130	1230	3	18.6	9	739	2	1	76		
DEC 31.80	NOV 28.80	1330	1030	4	52.0	0	740	2	1	74	A	M
JAN 30.81	DEC 31.80	1030	900	4	19.9	9	741	2	1	73		
FEB 27.81	JAN 30.81	900	1000	4	71.0	0	742	2	1	20		N
MAR 31.81	FEB 27.81	1100	800	1	15.0	0	1957	2	1	69		
MAY 1.81	MAR 31.81	830	1200	1	99.4	9	1897	2	1	10	F	N
MAY 29.81	MAY 1.81	1200	900	1	37.0	0	19007	2	1	49	FI	N
JUN 30.81	MAY 29.81	900	1130	1	63.0	0	19023	2	1	85	A	
JUL 31.81	JUN 30.81	1130	1100	1	41.0	0	19039	2	1	66	AC	H
SEP 1.81	JUL 31.81	1100	1000	1	92.0	0	19055	2	1	95	D	
SEP 30.81	SEP 1.81	1000	1230	1	32.0	0	19074	2	1	89		
OCT 30.81	SEP 30.81	1230	1000	1	142.0	0	19092	2	1	120		N
NOV 30.81	NOV 2.81	1000	1100	1	42.0	0	19112	2	1	84	AC	
JAN 5.82	NOV 30.81	1100	1300	4	66.0	0	19132	2	1	74	AC	
										58	ACD	

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
SEP 30.80	SEP 3.80	1795.0	44.4	4.05	0.1254	5.05	0.72	0.49
OCT 31.80	SEP 30.80	1505.0	34.3	4.31	0.0936	4.45	0.70	0.75
NOV 28.80	OCT 31.80	450.0	44.0	U 6.58	0.1018	7.40	1.06	U 2.05
DEC 31.80	NOV 28.80	1240.0	29.7	4.29	0.1004	2.45	0.65	0.68
JAN 30.81	DEC 31.80	U 135.0	*****	3.87	******	9.80	U 2.50	*****
FEB 27.81	JAN 30.81	1605.0	34.2	4.16	0.1048	2.90	0.54	0.19
MAR 31.81	FEB 27.81	U 50.0	*****	U 5.54	******	7.60	1.22	*****
MAY 1.81	MAR 31.81	U 1605.0	32.6	4.45	0.0736	5.10	0.80	U 1.36
MAY 29.81	MAY 1.81	1030.0	54.0	U 4.24	0.1076	9.25	1.17	U 2.00
JUN 30.81	MAY 29.81	1360.0	29.5	U 4.19	0.0492	6.25	0.85	U 2.14
JUL 31.81	JUN 30.81	1265.0	48.2	4.19	0.1104	6.85	0.77	U 1.02
SEP 1.81	JUL 31.81	2670.0	57.5	3.98	0.1326	6.75	0.75	0.70
SEP 30.81	SEP 1.81	1250.0	62.0	4.03	0.1406	9.15	1.04	1.10
OCT 30.81	SEP 30.81	3876.0	28.0	4.42	0.0716	3.80	0.44	0.54
NOV 30.81	NOV 2.81	1016.0	27.0	4.61	0.0672	4.65	0.65	U 1.34
JAN 5.82	NOV 30.81	1262.0	12.8	5.03	0.0522	1.95	0.36	0.80

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : WILKESPORT/CUMULATIVE/WET #04

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
SEP 30.80	SEP 3.80	0.19	0.80	0.090	0.020	0.040	0.600	0.004
OCT 31.80	SEP 30.80	0.44	0.98	0.140	0.050	0.080	0.790	0.014
NOV 28.80	OCT 31.80	0.67	U 4.18	0.360	0.390	0.220	U 3.600	0.220
DEC 31.80	NOV 28.80	0.42	0.77	0.100	0.010	0.120	0.510	0.008
JAN 30.81	DEC 31.80	U 2.60	*****	*****	*****	*****	U 2.300	*****
FEB 27.81	JAN 30.81	0.24	0.40	0.025	0.010	0.130	0.316	0.003
MAR 31.81	FEB 27.81	0.71	*****	*****	*****	*****	*****	*****
MAY 1.81	MAR 31.81	0.29	1.08	0.190	0.050	0.130	0.730	0.040
MAY 29.81	MAY 1.81	0.52	1.50	U 0.330	0.140	U 0.200	1.320	0.050
JUN 30.81	MAY 29.81	0.32	U 11.80	U 0.270	U 0.200	0.110	1.170	U 0.974
JUL 31.81	JUN 30.81	0.22	1.12	0.150	0.050	0.060	U 1.010	0.014
SEP 1.81	JUL 31.81	0.22	0.78	0.095	0.060	0.020	0.790	0.008
SEP 30.81	SEP 1.81	U 0.31	1.39	0.140	0.060	0.050	1.100	0.026
OCT 30.81	SEP 30.81	0.13	0.73	0.040	0.070	0.020	0.630	0.053
NOV 30.81	NOV 2.81	0.45	1.42	0.130	0.150	0.170	0.860	0.098
JAN 5.82	NOV 30.81	0.32	0.43	0.080	0.070	0.080	0.246	0.060

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINIUM MG/L
SEP 30.80	SEP 3.80	0.004	0.002	0.016	0.044	0.008	< 0.002	0.025
OCT 31.80	SEP 30.80	0.010	< 0.001	0.015	0.099	0.009	< 0.002	0.084
NOV 28.80	OCT 31.80	*****	*****	*****	*****	*****	*****	*****
DEC 31.80	NOV 28.80	0.005	< 0.001	0.028	0.050	0.014	< 0.002	0.131
JAN 30.81	DEC 31.80	*****	*****	*****	*****	*****	*****	*****
FEB 27.81	JAN 30.81	0.003	0.001	< 0.003	0.031	0.010	< 0.002	0.025
MAR 31.81	FEB 27.81	*****	*****	*****	*****	*****	*****	*****
MAY 1.81	MAR 31.81	0.009	< 0.001	0.010	U 0.384	0.010	< 0.002	U 0.363
MAY 29.81	MAY 1.81	0.008	< 0.001	0.016	0.119	0.010	< 0.002	0.102
JUN 30.81	MAY 29.81	0.009	< 0.001	L 0.007	L 0.078	0.007	< 0.002	L 0.033
JUL 31.81	JUN 30.81	0.006	< 0.001	0.009	0.095	0.011	< 0.002	0.090
SEP 1.81	JUL 31.81	0.005	< 0.001	0.008	0.045	0.011	< 0.002	0.037
SEP 30.81	SEP 1.81	0.006	< 0.001	0.011	0.056	0.014	< 0.002	0.051
OCT 30.81	SEP 30.81	0.003	< 0.001	0.006	0.031	0.007	< 0.002	0.019
NOV 30.81	NOV 2.81	0.005	< 0.001	0.020	0.052	0.010	< 0.002	0.059
JAN 5.82	NOV 30.81	0.006	< 0.001	0.044	0.182	0.014	< 0.002	0.165

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : WILKESPORT/CUMULATIVE/WET #04

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM MG/L	FREE H+ MG/L
SEP 30.80	SEP 3.80	0.001	0.0004	0.0491
OCT 31.80	SEP 30.80	0.003	0.0004	0.0490
NOV 28.80	OCT 31.80	*****	******	U 0.0003
DEC 31.80	NOV 28.80	0.002	0.0004	0.0513
JAN 30.81	DEC 31.80	*****	******	0.1349
FEB 27.81	JAN 30.81	0.004	0.0012	0.0692
MAR 31.81	FEB 27.81	*****	******	U 0.0029
MAY 1.81	MAR 31.81	0.014	0.0003	0.0355
MAY 29.81	MAY 1.81	0.009	0.0003	U 0.0575
JUN 30.81	MAY 29.81	L 0.001	0.0006	U 0.0006
JUL 31.81	JUN 30.81	0.002	0.0001	0.0646
SEP 1.81	JUL 31.81	0.001	0.0001	0.1047
SEP 30.81	SEP 1.81	0.003	0.0002	0.0933
OCT 30.81	SEP 30.81	0.001	0.0001	0.0380
NOV 30.81	NOV 2.81	0.001	< 0.0001	0.0155
JAN 5.82	NOV 30.81	0.002	0.0002	0.0093

PART IV

CENTRAL REGION

CUMULATIVE PRECIPITATION CHEMISTRY LISTINGS

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CAMPBELLFORD/CUMULATIVE/WET #13

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 09-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
SEP 30.80	SEP 4.80	1030	945	1	30.0	9	787	2	1	***	GHFIL	
OCT 31.80	SEP 30.80	915	800	1	105.0	0	788	2	1	63	HFI	
NOV 28.80	OCT 31.80	800	800	2	52.2	9	789	2	1	68	FI	
DEC 31.80	NOV 28.80	815	915	2	80.7	0	790	2	1	70	C	C
JAN 30.81	DEC 31.80	930	800	4	4.0	0	791	2	1	123	C	N
FEB 27.81	JAN 30.81	815	800	4	155.0	0	792	2	1	***	CGH	
MAR 31.81	FEB 27.81	815	800	1	26.5	0	1948	2	1	59		
APR 30.81	MAR 31.81	820	830	1	67.0	0	1889	2	1	64	ACD	
MAY 29.81	APR 30.81	830	810	1	62.0	0	24008	2	1	61	ADQ	M
JUN 30.81	MAY 29.81	755	730	1	69.0	0	24018	2	1	83	ACD	
JUL 31.81	JUN 30.81	730	800	1	72.0	0	24026	2	1	75	A	
AUG 31.81	JUL 31.81	810	755	1	76.1	9	24036	2	1	3	A	N
SEP 30.81	AUG 31.81	810	810	*	114.0	0	24047	2	1	67	AD	
OCT 30.81	SEP 30.81	820	825	1	100.0	0	24059	2	1	74	A	
NOV 30.81	OCT 30.81	820	845	4	32.0	0	24070	2	1	***		
JAN 5.82	NOV 30.81	845	800	4	59.7	0	24078	2	1	***	GH	N

REMOVAL DATE	EXPOSURE DATE	VOLUME ML		CONDUCT. UMHO/CM		PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L		NITRATE AS N MG/L		CALCIUM MG/L	
SEP 30.80	SEP 4.80	******		*****		4.32	0.1050	5.65		1.01		*****	
OCT 31.80	SEP 30.80	2165.0		16.6	U	5.38	0.0672	2.40		0.73	U	1.56	
NOV 28.80	OCT 31.80	1155.0		35.9		4.14	0.1068	3.25		0.87		0.75	
DEC 31.80	NOV 28.80	1840.0		25.5		4.20	0.1114	2.25		0.53		0.23	
JAN 30.81	DEC 31.80	160.0		*****		3.86	******	3.55		1.21		0.39	
FEB 27.81	JAN 30.81	3535.0		23.4		4.32	0.0734	1.85		0.39		0.07	
MAR 31.81	FEB 27.81	510.0		28.8		4.59	0.0640	4.45		0.67		1.22	
APR 30.81	MAR 31.81	1410.0		37.7		4.27	0.0936	4.75		0.80		0.78	
MAY 29.81	APR 30.81	1240.0		72.5	U	7.38	0.0872	4.70		0.59	U	1.51	
JUN 30.81	MAY 29.81	1870.0		37.2		4.21	0.0988	5.05		0.61		0.47	
JUL 31.81	JUN 30.81	1775.0		42.6		4.09	0.1294	5.05		0.55		0.54	
AUG 31.81	JUL 31.81	U 90.0		*****		4.43	******	U 8.20		0.64		*****	
SEP 30.81	AUG 31.81	2505.0		45.4		4.10	0.1134	5.20		0.60		0.27	
OCT 30.81	SEP 30.81	2434.0		28.8		4.24	0.0838	2.65		0.52		0.22	
NOV 30.81	OCT 30.81	******		23.8		4.34	0.0774	1.90		0.55		0.19	
JAN 5.82	NOV 30.81	U 867.0	U	7.5		5.24	0.0334	0.50		0.26		0.29	

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CAMPBELLFORD/CUMULATIVE/WET #13

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
SEP 30.80	SEP 4.80	U 1.21	*****	*****	*****	*****	*****	*****
OCT 31.80	SEP 30.80	0.32	0.58	0.075	0.170	0.190	0.260	0.008
NOV 28.80	OCT 31.80	0.20	0.85	0.080	0.040	0.050	0.540	0.017
DEC 31.80	NOV 28.80	0.23	0.42	0.015	0.050	0.120	0.276	0.006
JAN 30.81	DEC 31.80	0.50	0.49	0.020	0.020	0.170	0.258	0.001
FEB 27.81	JAN 30.81	0.26	0.25	0.015	0.040	0.160	0.174	0.004
MAR 31.81	FEB 27.81	0.27	0.84	0.140	0.020	0.170	0.630	0.005
APR 30.81	MAR 31.81	0.19	1.03	0.105	0.070	0.130	0.790	0.025
MAY 29.81	APR 30.81	0.50	U 14.70	0.105	U 2.050	0.150	U 7.800	U 0.920
JUN 30.81	MAY 29.81	0.19	1.18	0.060	0.100	0.070	0.910	0.035
JUL 31.81	JUN 30.81	0.14	0.66	0.080	0.040	0.020	0.570	0.010
AUG 31.81	JUL 31.81	U 0.58	*****	*****	*****	*****	0.264	*****
SEP 30.81	AUG 31.81	0.13	0.85	0.045	0.080	0.040	0.820	0.092
OCT 30.81	SEP 30.81	0.09	0.43	< 0.005	0.030	0.030	0.372	0.012
NOV 30.81	OCT 30.81	0.14	U 1.30	0.005	0.010	0.060	0.272	0.048
JAN 5.82	NOV 30.81	0.21	0.25	0.020	0.080	0.110	0.160	< 0.001

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINIUM MG/L
SEP 30.80	SEP 4.80	*****	*****	*****	*****	*****	*****	*****
OCT 31.80	SEP 30.80	0.003	< 0.001	L 0.022	L 0.016	0.004	< 0.002	L 0.070
NOV 28.80	OCT 31.80	0.010	< 0.001	0.009	0.103	0.015	< 0.002	0.078
DEC 31.80	NOV 28.80	0.002	< 0.001	0.011	0.021	0.010	< 0.002	0.016
JAN 30.81	DEC 31.80	*****	*****	*****	*****	*****	*****	*****
FEB 27.81	JAN 30.81	< 0.001	< 0.001	0.007	0.013	0.008	< 0.002	0.035
MAR 31.81	FEB 27.81	0.020	< 0.001	0.024	U 0.271	0.013	< 0.002	U 0.241
APR 30.81	MAR 31.81	0.006	< 0.001	0.005	0.085	0.006	< 0.002	0.078
MAY 29.81	APR 30.81	0.007	0.001	0.018	0.236	0.007	0.002	0.243
JUN 30.81	MAY 29.81	0.004	< 0.001	L 0.005	L 0.022	0.003	< 0.002	L 0.016
JUL 31.81	JUN 30.81	0.003	< 0.001	0.007	0.097	0.011	< 0.002	0.076
AUG 31.81	JUL 31.81	*****	*****	*****	*****	*****	*****	*****
SEP 30.81	AUG 31.81	0.004	0.001	0.009	0.028	0.009	< 0.002	0.006
OCT 30.81	SEP 30.81	0.002	< 0.001	0.007	0.028	0.010	< 0.002	0.024
NOV 30.81	OCT 30.81	*****	*****	*****	*****	*****	*****	*****
JAN 5.82	NOV 30.81	0.001	< 0.001	0.021	U 0.127	0.003	< 0.002	0.043

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CAMPBELLFORD/CUMULATIVE/WET #13 PAGE : 3

REMOVAL DATE	EXPOSURE DATE		COPPER MG/L		CADMIUM MG/L		FREE H+ MG/L
SEP 30.80	SEP 4.80		*****		******		0.0479
OCT 31.80	SEP 30.80	L	0.004		0.0002	U	0.0042
NOV 28.80	OCT 31.80		0.003		0.0003		0.0724
DEC 31.80	NOV 28.80		0.001	<	0.0001		0.0631
JAN 30.81	DEC 31.80		*****		******		0.1380
FEB 27.81	JAN 30.81		0.002		0.0002		0.0479
MAR 31.81	FEB 27.81		0.005		0.0003		0.0257
APR 30.81	MAR 31.81		0.012		0.0002		0.0537
MAY 29.81	APR 30.81		0.008		0.0001	U	0.0000
JUN 30.81	MAY 29.81	L<	0.001	<	0.0001		0.0617
JUL 31.81	JUN 30.81		0.003	<	0.0001		0.0813
AUG 31.81	JUL 31.81		*****		******		0.0372
SEP 30.81	AUG 31.81		0.007		0.0001		0.0794
OCT 30.81	SEP 30.81	L	0.002	<	0.0001		0.0575
NOV 30.81	OCT 30.81		*****		******		0.0457
JAN 5.82	NOV 30.81		0.004		0.0014		0.0058

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : COLDWATER/CUMULATIVE/WET #12

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 01-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
SEP 30.81	AUG 31.81	1630	1315	1	100.0	0	29027	2	1	86	LACF	
OCT 30.81	SEP 30.81	1315	1150	1	76.0	0	29037	2	1	58	ATJ	
NOV 29.81	OCT 30.81	1150	1600	3	79.0	0	29043	2	1	66		
JAN 5.82	NOV 29.81	1600	815	4	52.0	0	29051	2	1	***	GHD	C

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
SEP 30.81	AUG 31.81	2800.0	40.5	4.03	0.1198	3.85	0.44	0.16
OCT 30.81	SEP 30.81	1434.0	19.9	4.41	0.0694	1.90	0.28	0.26
NOV 29.81	OCT 30.81	1718.0	18.8	4.43	0.0688	1.55	0.31	0.18
JAN 5.82	NOV 29.81	1165.0	U 8.8	4.66	0.0472	0.55	0.21	0.12

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
SEP 30.81	AUG 31.81	0.08	0.35	0.020	0.040	0.030	0.286	0.019
OCT 30.81	SEP 30.81	0.08	0.20	0.020	0.070	0.020	0.154	0.011
NOV 29.81	OCT 30.81	0.05	0.28	0.005	0.020	0.040	0.190	0.010
JAN 5.82	NOV 29.81	0.12	0.36	0.015	0.010	0.050	0.132	0.008

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINUM MG/L
SEP 30.81	AUG 31.81	0.002	< 0.001	0.011	0.025	0.008	< 0.002	0.027
OCT 30.81	SEP 30.81	0.002	0.001	0.011	0.020	< 0.002	< 0.002	0.009
NOV 29.81	OCT 30.81	0.001	< 0.001	0.004	0.024	0.004	< 0.002	< 0.008
JAN 5.82	NOV 29.81	0.001	< 0.001	0.004	0.089	0.004	< 0.002	0.043

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : COLDWATER/CUMULATIVE/WET #12

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM MG/L	FREE H+ MG/L
SEP 30.81	AUG 31.81	0.004	0.0002	0.0933
OCT 30.81	SEP 30.81	< 0.002	0.0004	0.0389
NOV 29.81	OCT 30.81	< 0.002	0.0002	0.0372
JAN 5.82	NOV 29.81	0.003	< 0.0001	0.0219

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : UPPSET/CUMULATIVE/AET #20

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-WAIN 02-SWDA 03-COMP/04-ICI	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 03-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
JUL 1.80	MAY 31.80	****	****	1	*****	0	2214	2	1	***	F	C
JUL 31.80	JUN 30.80	****	****	1	173.2	9	2215	2	1	86		C
SEP 2.80	JUL 31.80	****	****	1	121.4	9	2433	2	1	76	FH	
SEP 30.80	SEP 2.80	1000	1015	1	81.0	0	781	2	1	69	FIC	C
OCT 31.80	SEP 30.80	1015	930	3	119.0	0	782	2	1	6		N
NOV 28.80	OCT 31.80	930	845	4	62.0	0	783	2	1	283		N
DEC 31.80	NOV 28.80	845	900	2	112.0	0	784	2	1	76	LF	
JAN 30.81	DEC 31.80	900	925	2	24.0	0	785	2	1	62	LF	
FEB 27.81	JAN 30.81	925	900	4	82.0	0	786	2	1	79		
MAR 31.81	FEB 27.81	900	915	1	52.0	0	1949	2	1	71	F	
APR 30.81	MAR 31.81	915	1000	1	85.0	0	1893	2	1	75	CD	
MAY 29.81	APR 30.81	1000	920	1	67.0	0	29001	2	1	64		M
JUN 30.81	MAY 29.81	920	940	1	97.0	0	29009	2	1	74	ADJ	
JUL 31.81	JUN 30.81	940	900	1	28.0	0	29013	2	1	84		
AUG 31.81	JUL 31.81	900	1230	1	120.0	0	29023	2	1	85	J	
SEP 30.81	AUG 31.81	1230	930	3	185.0	0	29025	2	1	66	ACLJ	
OCT 30.81	SEP 30.81	930	840	1	81.0	0	29039	2	1	73		
NOV 30.81	OCT 30.81	840	900	4	58.0	0	29047	2	1	22	O	N
JAN 5.82	NOV 30.81	900	900	4	78.0	0	29049	2	1	66	OH	

REMOVAL DATE	EXPOSURE DATE		VOLUME ML	CONDUCT. UMHO/CM	PH LAB	TOTAL H+ TO PH4.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
JUL 1.80	MAY 31.80		3370.0	34.6	4.11	0.0964	4.40	0.52	0.62
JUL 31.80	JUN 30.80		4840.0	21.0	4.27	0.0672	2.30	0.26	0.13
SEP 2.80	JUL 31.80		3010.0	59.5	3.84	0.1586	5.95	0.62	0.32
SEP 30.80	SEP 2.80		1825.0	33.5	4.06	0.1042	3.50	0.33	0.15
OCT 31.80	SEP 30.80	U	260.0	13.4	4.48	0.0504	2.10	0.35	0.42
NOV 29.80	OCT 31.80		3715.0	13.1	4.76	******	0.90	0.26	0.13
DEC 31.80	NOV 28.80		2775.0	14.2	4.34	0.0774	1.15	0.30	0.04
JAN 30.81	DEC 31.80		487.0	46.1	3.99	0.1314	2.90	0.93	0.16
FEB 27.81	JAN 30.81		2125.0	26.8	4.23	0.0822	1.90	0.44	0.05
MAR 31.81	FEB 27.81		1215.0	34.1	4.32	******	*****	*****	0.14
APR 30.81	MAR 31.81		2075.0	32.6	4.32	0.0884	4.40	0.66	0.73
MAY 29.81	APR 30.81		1400.0	50.0	4.04	0.1349	5.25	0.64	0.33
JUN 30.81	MAY 29.81		2360.0	32.8	4.20	0.0912	3.45	0.54	0.38
JUL 31.81	JUN 30.81		765.0	36.3	4.35	0.0820	4.80	0.49	0.24
AUG 31.81	JUL 31.81		3330.0	54.3	3.95	0.1518	5.35	0.48	0.14
SEP 30.81	AUG 31.81		4000.0	37.3	4.21	0.0956	4.15	0.51	0.22
OCT 30.81	SEP 30.81		1924.0	24.4	4.28	0.0916	2.00	0.32	0.11
NOV 30.81	OCT 30.81	U	417.0	17.3	4.49	0.0820	1.45	0.28	0.12
JAN 5.82	NOV 30.81		1644.0	24.6	4.17	0.1002	1.45	0.60	0.10

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORSET/CUMULATIVE/WET #20

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
JUL 1.80	MAY 31.80	0.10	0.32	0.090	0.200	0.020	0.590	0.046
JUL 31.80	JUN 30.80	0.07	0.30	0.025	0.150	0.070	0.292	0.001
SEP 2.80	JUL 31.80	0.17	0.54	0.035	0.020	0.020	0.490	0.002
SEP 30.80	SEP 2.80	0.05	0.56	0.010	0.020	< 0.010	0.420	0.003
OCT 31.80	SEP 30.80	0.17	*****	0.060	0.110	U 0.310	0.390	*****
NOV 28.80	OCT 31.80	0.08	*****	0.015	0.010	0.010	0.282	*****
DEC 31.80	NOV 28.80	0.04	0.21	0.010	< 0.010	0.020	0.106	< 0.001
JAN 30.81	DEC 31.80	0.22	0.37	0.020	0.010	0.070	0.298	0.005
FEB 27.81	JAN 30.81	0.15	0.24	0.005	0.010	0.070	0.156	0.003
MAR 31.81	FEB 27.81	*****	0.74	0.055	0.020	0.090	*****	0.005
APR 30.81	MAR 31.81	0.17	0.84	0.120	0.040	0.100	0.560	0.012
MAY 29.81	APR 30.81	0.17	0.61	0.055	0.040	0.050	0.490	0.012
JUN 30.81	MAY 29.81	0.14	0.68	0.065	0.040	0.040	0.540	0.012
JUL 31.81	JUN 30.81	0.40	U 1.66	0.050	0.410	0.040	U 1.130	0.014
AUG 31.81	JUL 31.81	0.14	0.50	0.020	0.040	0.030	0.400	0.012
SEP 30.81	AUG 31.81	0.08	0.75	0.045	0.040	0.030	0.600	0.034
OCT 30.81	SEP 30.81	0.04	0.20	< 0.005	0.010	0.020	0.198	0.004
NOV 30.81	OCT 30.81	0.15	0.28	0.010	0.020	0.090	0.156	0.008
JAN 5.82	NOV 30.81	U 0.70	0.45	0.015	0.010	0.030	0.274	0.002

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINUM MG/L
JUL 1.80	MAY 31.80	0.002	< 0.001	0.005	0.035	0.026	< 0.002	0.057
JUL 31.80	JUN 30.80	0.003	< 0.001	0.006	0.052	0.015	< 0.002	0.041
SEP 2.80	JUL 31.80	0.006	0.001	0.009	0.042	0.009	< 0.005	0.027
SEP 30.80	SEP 2.80	0.001	0.008	L 0.003	L 0.027	0.009	< 0.002	L 0.006
OCT 31.80	SEP 30.80	*****	*****	*****	*****	*****	*****	*****
NOV 28.80	OCT 31.80	0.002	< 0.001	0.009	0.047	0.007	< 0.002	0.063
DEC 31.80	NOV 28.80	< 0.001	< 0.001	0.004	0.013	0.004	< 0.002	0.018
JAN 30.81	DEC 31.80	0.003	0.002	0.042	0.029	0.007	< 0.002	0.032
FEB 27.81	JAN 30.81	0.001	0.001	0.007	0.013	0.006	< 0.002	0.011
MAR 31.81	FEB 27.81	0.003	0.001	0.010	0.109	0.006	< 0.002	0.070
APR 30.81	MAR 31.81	0.010	< 0.001	0.012	0.259	0.006	< 0.002	0.235
MAY 29.81	APR 30.81	0.004	< 0.001	0.005	0.111	0.008	< 0.002	0.083
JUN 30.81	MAY 29.81	0.009	0.001	L 0.004	L 0.073	0.006	< 0.002	L 0.036
JUL 31.81	JUN 30.81	0.003	< 0.001	0.004	0.052	0.007	< 0.002	0.047
AUG 31.81	JUL 31.81	0.002	< 0.001	0.005	0.075	0.007	< 0.002	0.013
SEP 30.81	AUG 31.81	0.004	< 0.001	0.003	0.034	0.006	< 0.002	0.027
OCT 30.81	SEP 30.81	0.002	< 0.001	0.005	0.017	0.005	< 0.002	0.008
NOV 30.81	OCT 30.81	*****	*****	*****	*****	*****	*****	*****
JAN 5.82	NOV 30.81	< 0.001	0.001	0.005	0.018	0.004	< 0.002	0.011

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORSET/CUMULATIVE/*ET #20

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM MG/L	FREE *+ MG/L
JUL 1.80	MAY 31.80	0.001	0.0002	0.0776
JUL 31.80	JUN 30.80	0.001	0.0002	0.0537
SEP 2.81	JUL 31.80	0.002	0.0002	0.1445
SEP 30.80	SEP 2.80	L 0.001	0.0001	0.0871
OCT 31.80	SEP 30.80	*****	******	0.0132
NOV 28.80	OCT 31.80	0.001	< 0.0001	0.0174
DEC 11.80	NOV 25.80	< 0.001	< 0.0001	0.0457
JAN 30.81	DEC 31.80	0.003	0.0001	0.1023
FEB 27.81	JAN 30.81	0.001	< 0.0001	0.0589
MAR 31.81	FEB 27.81	0.003	< 0.0001	0.0479
APR 30.81	MAR 31.81	U 0.019	< 0.0001	0.0479
MAY 29.81	APR 30.81	0.003	0.0003	0.0832
JUN 30.81	MAY 29.81	L 0.001	0.0006	0.0631
JUL 31.81	JUN 30.81	0.004	0.0004	0.0447
AUG 31.81	JUL 31.81	0.001	0.0001	0.1122
SEP 30.81	AUG 31.81	0.001	0.0001	0.0617
OCT 30.81	SEP 30.81	0.003	< 0.0001	0.0525
NOV 30.81	OCT 30.81	*****	******	0.0324
JAN 5.82	NOV 30.81	< 0.002	< 0.0001	0.0676

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MILTON/CUMULATIVE/WET #10 PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 09-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
SEP 30.80	SEP 2.80	900	900	1	47.1	9	765	2	1	44		N
OCT 28.80	SEP 30.80	900	1200	1	77.4	9	766	2	1	20		N
NOV 28.80	OCT 31.80	900	1500	3	24.2	9	767	2	1	34	CDFIL	N
DEC 31.80	NOV 28.80	1500	800	3	54.8	9	768	2	1	***		X
JAN 31.81	DEC 31.80	****	****	2	16.9	9	2360	2	1	18		N
FEB 27.81	JAN 31.81	1415	1530	3	72.4	9	769	2	1	61	A	H
MAR 31.81	FEB 27.81	1550	800	3	28.4	9	1952	2	1	57		HC
APR 30.81	MAR 31.81	800	800	1	56.4	9	1886	2	1	24	C	NH
MAY 29.81	APR 30.81	800	800	1	42.5	0	12004	2	1	36		N
JUN 30.81	MAY 29.81	800	800	1	65.0	0	12012	2	1	72		
JUL 31.81	JUN 30.81	800	830	1	112.5	0	12016	2	1	14	A	N
AUG 31.81	JUL 31.81	830	800	1	117.9	9	10241	2	1	39		N
SEP 30.81	AUG 31.81	800	800	1	86.7	8	38002	2	1	89	A	
OCT 30.81	OCT 1.81	800	800	3	112.8	9	38012	2	1	80		
NOV 30.81	OCT 30.81	800	830	3	55.2	9	38018	2	1	27	A	N
JAN 5.82	NOV 30.81	800	800	3	52.0	0	38034	2	1	***	GH	H

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
SEP 30.80	SEP 2.80	U 675.0	27.4	U 5.42	0.0730	6.20	0.64	0.69
OCT 28.80	SEP 30.80	U 517.0	25.5	U 5.95	0.0524	5.40	0.67	U 2.14
NOV 28.80	OCT 31.80	U 270.0	*****	U 6.50	******	7.35	U 1.96	U 3.85
DEC 31.80	NOV 28.80	******	*****	*****	******	*****	*****	*****
JAN 31.81	DEC 31.80	U 100.0	*****	U 5.70	******	6.20	1.28	*****
FEB 27.81	JAN 31.81	1435.0	21.7	U 5.66	0.0336	3.80	0.72	U 1.14
MAR 31.81	FEB 27.81	533.0	U 5.6	U 7.22	0.0308	7.45	U 1.17	U 4.70
APR 30.81	MAR 31.81	U 450.0	30.6	U 6.83	0.0340	5.80	0.76	U 1.90
MAY 29.81	APR 30.81	U 510.0	58.0	4.06	0.1462	7.15	0.97	0.70
JUN 30.81	MAY 29.81	1530.0	35.0	4.54	0.0706	U 6.10	0.90	0.77
JUL 31.81	JUN 30.81	U 545.0	29.0	4.49	0.0720	4.60	0.42	0.52
AUG 31.81	JUL 31.81	U 1500.0	64.5	3.88	0.1604	6.90	0.73	0.29
SEP 30.81	AUG 31.81	2530.0	39.4	4.17	0.1002	4.10	0.58	0.43
OCT 30.81	OCT 1.81	2930.0	24.2	4.28	0.0924	3.05	0.49	0.44
NOV 30.81	OCT 30.81	U 499.0	17.8	U 5.06	0.0616	2.75	0.37	0.84
JAN 5.82	NOV 30.81	1493.0	24.1	U 5.65	0.0286	3.05	0.71	U 1.88

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MILTON/CUMULATIVE/WET #10

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L		KJELDAHL AS N MG/L		MAGNESIM MG/L		POTASSIM MG/L		SODIUM MG/L		AMMONIUM AS N MG/L		PHOSPHOR MG/L	
SEP 30.80	SEP 2.80	0.20		U 2.42		U 0.230		0.030		< 0.050		U 1.870		0.007	
OCT 28.80	SEP 30.80	0.37		1.27		J 0.465		0.150		U 0.200		1.210		0.042	
NOV 28.80	OCT 31.80	U 1.17		1.38		J 1.700		0.150		U 0.500		0.730		0.052	
DEC 31.80	NOV 28.80	*****		*****		*****		*****		*****		*****		*****	
JAN 31.81	DEC 31.80	U 3.20		*****		*****		*****		*****		*****		*****	
FEB 27.81	JAN 31.81	0.80		0.48				0.050				0.530		*****	
MAR 31.81	FEB 27.81	U 1.65		1.37		U 0.570		0.050		U 1.000		0.376		0.004	
APR 30.81	MAR 31.81	0.48		1.55		U 1.700		0.050		U 1.000		1.080		0.032	
MAY 29.81	APR 30.81	0.44		1.48		U 0.775		0.140		0.250		1.060		0.085	
JUN 30.81	MAY 29.81	U 0.40		U 2.18				0.210		0.060		0.090		1.040	
JUL 31.81	JUN 30.81	0.16		U 2.10		U 0.265		0.090		U 0.430		0.170		1.410	
AUG 31.81	JUL 31.81	0.17		0.90		U 0.125		0.065		U 0.220		0.100		0.840	
SEP 30.81	AUG 31.81	U 0.58		0.42				0.140		0.040		0.010		0.660	
OCT 30.81	OCT 1.81	0.16		0.52		U 0.135		0.020		U 0.220		U 0.300		0.420	
NOV 30.81	OCT 30.81	0.36		1.25		J 0.390		0.030		0.030		0.352		0.035	
JAN 5.82	NOV 30.81	U 1.02		0.58		U 0.650		0.100		U 0.130		0.150		0.022	
										0.550		0.780		U 0.105	
												0.420		< 0.001	

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L		NICKEL MG/L		ZINC MG/L		IRON MG/L		LEAD MG/L		VANADIUM MG/L		ALUMINUM MG/L	
SEP 30.80	SEP 2.80	0.005		< 0.001		- 0.014		L 0.048		0.010		< 0.002		L 0.046	
OCT 28.80	SEP 30.80	*****		*****		*****		*****		*****		*****		*****	
NOV 28.80	OCT 31.80	*****		*****		*****		*****		*****		*****		*****	
DEC 31.80	NOV 28.80	*****		*****		*****		*****		*****		*****		*****	
JAN 31.81	DEC 31.80	*****		*****		*****		*****		*****		*****		*****	
FEB 27.81	JAN 31.81	U 0.011		0.001		U 0.028		0.130		0.022		< 0.002		0.048	
MAR 31.81	FEB 27.81	0.009		0.003		0.020		0.193		0.023		< 0.002		U 0.636	
APR 30.81	MAR 31.81	*****		*****		*****		*****		*****		*****		*****	
MAY 29.81	APR 30.81	U 0.011		< 0.001		0.021		U 0.243		U 0.030		0.003		U 0.271	
JUN 30.81	MAY 29.81	0.006		0.001		L 0.012		L 0.044		0.009		< 0.002		L 0.022	
JUL 31.81	JUN 30.81	0.006		< 0.001		U 0.017		U 0.211		0.010		< 0.002		U 0.146	
AUG 31.81	JUL 31.81	0.004		< 0.001		0.008		0.047		0.010		< 0.002		0.047	
SEP 30.81	AUG 31.81	0.003		0.001		0.011		0.024		0.011		< 0.002		0.015	
OCT 30.81	OCT 1.81	0.003		< 0.001		- 0.009		0.031		0.015		< 0.002		0.040	
NOV 30.81	OCT 30.81	U 0.017		< 0.001		0.020		0.143		0.025		< 0.002		0.052	
JAN 5.82	NOV 30.81	0.017		< 0.001		0.015		0.126		0.016		< 0.002		0.080	

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MILTON/CUMULATIVE/WET #10

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM UG/L	FREE H+ UG/L
SEP 30.80	SEP 2.80	L< 0.001	0.0003	U 0.0034
OCT 29.80	SEP 30.80	*****	******	U 0.0011
NOV 28.80	OCT 31.80	*****	******	U 0.0003
DEC 31.80	NOV 28.80	*****	******	******
JAN 31.81	DEC 31.80	*****	******	U 0.0002
FEB 27.81	JAN 31.81	0.004	0.0001	U 0.0022
MAR 31.81	FEB 27.81	U 0.012	0.0002	U 0.0001
APR 30.81	MAR 31.81	*****	******	U 0.0001
MAY 29.81	APR 30.81	U 0.026	0.0002	0.0871
JUN 30.81	MAY 29.81	L< 0.001	< 0.0001	0.0288
JUL 31.81	JUN 30.81	0.003	0.0001	0.0324
AUG 31.81	JUL 31.81	< 0.002	0.0002	0.1318
SEP 30.81	AUG 31.81	0.006	0.0002	0.0676
OCT 30.81	OCT 1.81	L< 0.001	< 0.0001	0.0525
NOV 30.81	OCT 30.81	0.003	0.0029	U 0.0009
JAN 5.82	NOV 30.81	< 0.002	0.0001	U 0.0002

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : UXAPIOSE/CUMULATIVE/WET #11

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 04-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-DV HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
SEP 30.80	SEP 2.80	****	1445	1	61.9	9	770	2	1	74		
NOV 1.80	OCT 1.80	1430	830	3	95.4	9	771	2	1	55	HIF	
NOV 30.80	NOV 1.80	830	900	3	53.2	9	772	2	1	48	FJ	NH
DEC 31.80	NOV 30.80	900	1145	3	105.5	9	773	2	1	***		X
JAN 30.81	DEC 31.80	****	****	2	21.7	9	2361	2	1	21		N
FEB 27.81	JAN 30.81	1050	1220	3	105.9	9	774	2	1	***	G	N
MAR 31.81	FEB 27.81	1220	1700	1	34.9	9	1951	2	1	70		
APR 29.81	MAR 31.81	1700	1700	1	54.4	9	1964	2	1	40		NH
MAY 31.81	APR 29.81	1700	900	1	78.0	9	12006	2	1	67		H
JUN 29.81	MAY 31.81	900	1700	1	108.1	9	12014	2	1	37		N
JUL 30.81	JUN 29.81	1700	1950	1	104.4	9	12018	2	1	***	G	N
AUG 30.81	JUL 30.81	1950	1000	1	100.9	9	10238	2	1	41		N
OCT 1.81	AUG 30.81	1000	1815	*	122.4	9	10280	2	1	55		
OCT 31.81	OCT 1.81	1815	1115	1	55.0	0	38010	2	1	119		
NOV 29.81	OCT 30.81	1315	1200	1	65.0	0	38020	2	1	78		
JAN 4.82	NOV 29.81	1200	1700	1	45.0	0	38032	2	1	56		

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
SEP 30.80	SEP 2.80	1535.0	27.2	4.25	0.0844	2.70	0.48	0.23
NOV 1.80	OCT 1.80	1740.0	25.7	4.39	0.0760	3.15	0.58	0.58
NOV 30.80	NOV 1.80	U 835.0	45.4	4.34	0.0972	4.70	1.19	1.51
DEC 31.80	NOV 30.80	******	*****	*****	******	*****	*****	*****
JAN 30.81	DEC 31.80	U 150.0	*****	4.25	******	5.65	1.04	*****
FEB 27.81	JAN 30.81	U 70.0	*****	U 6.65	******	2.50	0.42	*****
MAR 31.81	FEB 27.81	795.0	26.7	3.24	0.0382	4.35	0.75	U 1.61
APR 29.81	MAR 31.81	U 715.0	25.8	4.80	0.0524	4.75	0.77	U 1.40
MAY 31.81	APR 29.81	1700.0	33.5	U 5.81	0.0366	6.25	0.82	U 3.40
JUN 29.81	MAY 31.81	U 1330.0	19.9	4.62	0.0514	3.20	0.39	0.86
JUL 30.81	JUN 29.81	U 480.0	47.5	3.99	0.1340	6.00	0.57	0.58
AUG 30.81	JUL 30.81	U 1345.0	63.0	3.90	0.1568	6.50	0.77	0.47
OCT 1.81	AUG 30.81	2200.0	44.1	4.06	0.1204	4.45	0.57	0.31
OCT 31.81	OCT 1.81	2140.0	19.4	4.42	0.0738	2.00	0.30	0.22
NOV 29.81	OCT 30.81	1661.0	26.5	4.27	0.0916	2.45	0.51	0.34
JAN 4.82	NOV 29.81	825.0	29.0	4.31	0.0908	2.65	0.49	0.66

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIDS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : UXBRIDGE/CUMULATIVE/WET #11

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
SEP 30.80	SEP 2.80	0.11	1.30	0.030	0.020	0.020	0.520	0.033
NOV 1.80	OCT 1.80	0.21	0.80	0.070	0.140	0.070	0.610	0.011
NOV 30.80	NOV 1.80	0.29	1.31	0.175	0.080	0.100	1.030	0.021
DEC 31.80	NOV 30.80	*****	*****	*****	*****	*****	*****	*****
JAN 30.81	DEC 31.80	U 2.40	*****	*****	*****	*****	0.690	*****
FEB 27.81	JAN 30.81	0.48	*****	*****	*****	*****	0.236	*****
MAR 31.81	FEB 27.81	0.84	1.01	0.140	0.020	0.560	0.750	0.012
APR 29.81	MAR 31.81	0.16	1.11	0.120	0.060	0.130	0.980	0.002
MAY 31.81	APR 29.81	0.28	1.60	0.200	0.140	0.100	0.900	0.104
JUN 29.81	MAY 31.81	0.10	0.62	0.055	0.030	<W 0.010	0.430	0.012
JUL 30.81	JUN 29.81	0.13	0.43	0.055	0.030	0.020	0.660	0.007
AUG 30.81	JUL 30.81	0.17	0.78	0.055	0.040	0.010	0.570	0.015
OCT 1.81	AUG 30.81	0.09	0.50	0.050	0.030	0.020	0.410	0.014
OCT 31.81	OCT 1.81	0.06	0.30	< 0.005	0.010	0.010	0.230	0.006
NOV 29.81	OCT 30.81	0.28	0.40	0.040	0.020	0.050	0.322	0.005
JAN 4.82	NOV 29.81	0.29	0.58	0.045	0.020	0.170	0.430	0.012

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINIUM MG/L
SEP 30.80	SEP 2.80	0.002	0.002	0.013	0.050	0.008	< 0.002	0.026
NOV 1.80	OCT 1.80	0.004	0.002	0.009	0.064	0.010	< 0.002	0.047
NOV 30.80	NOV 1.80	0.014	< 0.001	0.039	0.279	0.031	< 0.002	0.187
DEC 31.80	NOV 30.80	*****	*****	*****	*****	*****	*****	*****
JAN 30.81	DEC 31.80	*****	*****	*****	*****	*****	*****	*****
FEB 27.81	JAN 30.81	*****	*****	*****	*****	*****	*****	*****
MAR 31.81	FEB 27.81	0.012	< 0.001	0.022	0.155	0.008	< 0.002	0.145
APR 29.81	MAR 31.81	0.010	< 0.001	0.006	0.059	0.003	< 0.002	0.071
MAY 31.81	APR 29.81	0.007	< 0.001	0.009	0.126	0.005	< 0.002	0.093
JUN 29.81	MAY 31.81	0.004	< 0.001	L 0.006	L 0.034	0.005	< 0.002	L 0.019
JUL 30.81	JUN 29.81	*****	*****	*****	*****	*****	*****	*****
AUG 30.81	JUL 30.81	0.004	< 0.001	0.010	0.065	0.012	< 0.002	0.059
OCT 1.81	AUG 30.81	0.003	0.001	0.007	0.033	0.009	< 0.002	0.009
OCT 31.81	OCT 1.81	0.001	< 0.001	L 0.002	0.019	0.006	< 0.002	0.023
NOV 29.81	OCT 30.81	0.002	< 0.001	0.005	0.032	0.012	< 0.002	0.013
JAN 4.82	NOV 29.81	0.004	< 0.001	0.015	0.047	0.015	< 0.002	0.030

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : UXBRIDGE/CUMULATIVE/WET #11

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM MG/L	FREE H+ MG/L
SEP 30.80	SEP 2.80	< 0.002	< 0.0001	0.0562 *
NOV 1.80	OCT 1.80	0.002	0.0003	0.0407
NOV 30.80	NOV 1.80	0.005	0.0005	0.0457
DEC 31.80	NOV 30.80	*****	******	******
JAN 30.81	DEC 31.80	*****	******	0.0562
FEB 27.81	JAN 30.81	*****	******	U 0.0002
MAR 31.81	FEB 27.81	0.005	0.0006	0.0058
APR 29.81	MAR 31.81	0.021	< 0.0001	0.0158
MAY 31.81	APR 29.81	0.003	0.0003	U 0.0002
JUN 29.81	MAY 31.81	L 0.001	< 0.0001	0.0240
JUL 30.81	JUN 29.81	*****	******	0.1023
AUG 30.81	JUL 30.81	0.002	0.0002	0.1259
OCT 1.81	AUG 30.81	0.004	0.0002	0.0871
OCT 31.81	OCT 1.81	L< 0.001	< 0.0001	0.0340
NOV 29.81	OCT 30.81	< 0.002	0.0008	0.0537
JAN 4.82	NOV 29.81	0.003	< 0.0001	0.0490

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : WILBERFORCE/CUMULATIVE/WFT #18

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 04-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-OV HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
SEP 30.80	SEP 2.80	1000	1000	1	72.0	0	775	2	1	14		N
OCT 31.80	SEP 30.80	1000	900	3	124.0	0	776	2	1	8	AR	N
NOV 28.80	OCT 31.80	900	900	3	68.1	9	777	2	1	61		
DEC 31.80	NOV 28.80	900	1100	4	110.0	0	778	2	1	***	FIG	NC
JAN 30.81	DEC 31.80	1100	1245	4	15.0	0	779	2	1	82		T
FEB 27.81	JAN 30.81	1245	1130	4	116.0	0	780	2	1	13	FI	N
MAR 31.81	FEB 27.81	1130	1400	1	58.0	0	1950	2	1	87	C	
APR 30.81	MAR 31.81	1400	1330	1	81.0	0	2162	2	1	***	DGOE	
MAY 29.81	APR 30.81	1330	1135	1	76.0	0	29005	2	1	67	CD	
JUN 30.81	MAY 29.81	1135	1410	1	95.0	0	29008	2	1	84	CJ	
JUL 31.81	JUN 30.81	1410	1300	1	51.0	0	29017	2	1	93		
AUG 31.81	JUL 31.81	1300	1330	1	84.0	0	29021	2	1	80	C	
SEP 30.81	AUG 31.81	1330	1215	3	159.0	0	29031	2	1	***	ACGH	N
OCT 30.81	SEP 30.81	1215	1200	1	87.0	0	29033	2	1	74	C	
NOV 30.81	OCT 30.81	1200	1200	3	55.0	0	29045	2	1	78		
DEC 31.81	NOV 30.81	1200	1200	2	37.0	0	29062	2	1	***	CGH	NC

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH LAB	TOTAL H+ TO PH9.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
SEP 30.80	SEP 2.80	U 340.0	37.6	4.12	0.1116	3.80	0.49	0.19
OCT 31.80	SEP 30.80	U 360.0	18.5	U 5.42	0.0440	3.15	*****	U 1.34
NOV 28.80	OCT 31.80	1370.0	38.5	4.15	0.1162	3.30	0.93	0.47
DEC 31.80	NOV 28.80	U 1520.0	11.0	4.54	0.0588	0.75	0.18	0.05
JAN 30.81	DEC 31.80	400.0	47.3	4.03	0.0336	2.55	1.11	0.18
FEB 27.81	JAN 30.81	U 508.0	35.3	4.17	0.1044	2.85	0.55	0.10
MAR 31.81	FEB 27.81	1645.0	31.2	4.28	0.0904	3.35	0.54	0.32
APR 30.81	MAR 31.81	******	*****	*****	******	*****	*****	*****
MAY 29.81	APR 30.81	1670.0	44.1	4.09	0.1202	5.35	0.70	0.49
JUN 30.81	MAY 29.81	2600.0	22.6	4.56	0.0606	3.35	0.38	0.30
JUL 31.81	JUN 30.81	1545.0	59.0	3.89	0.1584	5.05	0.55	0.23
AUG 31.81	JUL 31.81	2190.0	44.5	4.04	0.1294	4.40	0.47	0.13
SEP 30.81	AUG 31.81	U 200.0	*****	U 5.58	******	4.55	0.49	0.18
OCT 30.81	SEP 30.81	2098.0	22.8	4.29	0.0830	1.85	0.29	0.10
NOV 30.81	OCT 30.81	1398.0	34.2	4.16	0.1104	2.85	0.60	0.16
DEC 31.81	NOV 30.81	U 154.0	15.8	4.38	******	1.25	0.27	0.10

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : WILMERFORCE/CUMULATIVE/WET #18

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L		KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
SEP 30.80	SEP 2.80	*****		1.12	0.015	0.020	0.010	*****	*****
OCT 31.80	SEP 30.80	0.41	U	1.97	0.085	0.360	U 0.580	U 1.870	0.098
NOV 28.80	OCT 31.80	0.17		0.82	0.055	0.050	0.030	0.690	0.014
DEC 31.80	NOV 28.80	0.04		0.22	0.010	< 0.010	0.010	0.110	0.003
JAN 30.81	DEC 31.80	0.37		0.44	0.015	0.010	0.210	0.254	0.007
FEB 27.81	JAN 30.81	0.14		0.95	0.010	0.010	0.080	0.352	0.005
MAR 31.81	FEB 27.81	0.18		0.84	0.050	0.020	0.090	0.530	0.011
APR 30.81	MAR 31.81	*****		*****	*****	*****	*****	*****	*****
MAY 29.81	APR 30.81	0.26		1.07	0.080	0.140	0.120	0.760	0.057
JUN 30.81	MAY 29.81	0.14	U	1.58	0.050	0.330	0.030	0.720	U 0.118
JUL 31.81	JUN 30.81	0.14		0.57	0.030	0.030	0.030	0.510	0.006
AUG 31.81	JUL 31.81	0.10		0.45	0.025	0.030	0.020	0.400	0.010
SEP 30.81	AUG 31.81	0.12		*****	0.035	0.340	0.030	U 1.640	*****
OCT 30.81	SEP 30.81	0.04		0.18	< 0.005	0.020	0.020	0.158	0.013
NOV 30.81	OCT 30.81	0.08		0.48	0.010	0.010	0.040	0.350	0.010
DEC 31.81	NOV 30.81	0.14		*****	< 0.005	0.010	0.060	0.164	*****

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINUM MG/L
SEP 30.80	SEP 2.80	*****	*****	*****	*****	*****	*****	*****
OCT 31.80	SEP 30.80	*****	*****	*****	*****	*****	*****	*****
NOV 28.80	OCT 31.80	0.006	0.002	0.022	0.119	0.021	< 0.002	0.066
DEC 31.80	NOV 28.80	< 0.001	U 0.067	0.013	0.048	< 0.001	< 0.002	< 0.009
JAN 30.81	DEC 31.80	*****	*****	*****	*****	*****	*****	*****
FEB 27.81	JAN 30.81	0.003	0.002	U 0.125	0.042	0.009	< 0.002	0.012
MAR 31.81	FEB 27.81	0.004	0.001	0.011	0.057	0.002	< 0.002	0.047
APR 30.81	MAR 31.81	*****	*****	*****	*****	*****	*****	*****
MAY 29.81	APR 30.81	0.005	< 0.001	0.022	0.170	0.010	< 0.002	0.076
JUN 30.81	MAY 29.81	0.010	0.002	L 0.022	L 0.160	0.027	< 0.002	L 0.053
JUL 31.81	JUN 30.81	0.002	< 0.001	0.006	0.057	0.008	< 0.002	0.043
AUG 31.81	JUL 31.81	0.002	< 0.001	0.004	0.023	0.009	< 0.002	0.007
SEP 30.81	AUG 31.81	*****	*****	*****	*****	*****	*****	*****
OCT 30.81	SEP 30.81	0.001	< 0.001	0.004	0.015	0.004	< 0.002	0.006
NOV 30.81	OCT 30.81	0.003	< 0.001	0.007	0.021	0.013	< 0.002	0.017
DEC 31.81	NOV 30.81	*****	*****	*****	*****	*****	*****	*****

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : WILBERFORCE/CUMULATIVE/4FT #18

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM MG/L	FREE H+ MG/L
SEP 30.80	SEP 2.80	*****	******	0.0759
OCT 31.80	SEP 30.80	*****	******	U 0.0004
NOV 28.80	OCT 31.80	0.002	0.0013	0.0708
DEC 31.80	NOV 28.80	0.001	< 0.0001	0.0288
JAN 30.81	DEC 31.80	*****	******	0.0933
FEB 27.81	JAN 30.81	0.012	0.0001	0.0676
MAR 31.81	FEB 27.81	0.003	0.0001	0.0525
APR 30.81	MAR 31.81	*****	******	******
MAY 29.81	APR 30.81	0.006	0.0140	0.0813
JUN 30.81	MAY 29.81	L 0.004	0.0002	0.0275
JUL 31.81	JUN 30.81	0.002	0.0001	0.1288
AUG 31.81	JUL 31.81	0.001	0.0002	0.0912
SEP 30.81	AUG 31.81	*****	******	U 0.0026
OCT 30.81	SEP 30.81	0.001	0.0003	0.0513
NOV 30.81	OCT 30.81	0.003	0.0003	0.0692
DEC 31.81	NOV 30.81	*****	******	0.0417

PART V

SOUTHEASTERN REGION

CUMULATIVE PRECIPITATION CHEMISTRY LISTINGS

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DALHOUSIE MILLS/CUMULATIVE/WET #16

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 09-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
SEP 30.80	SEP 3.80	1800	700	1	98.3	9	805	2	1	77	HFIL	
NOV 3.80	SEP 30.80	****	1400	1	90.2	9	806	2	1	63	FI	
NOV 28.80	NOV 3.80	1800	845	3	94.0	0	807	2	1	***	G	N
DEC 31.80	NOV 28.80	900	850	2	108.0	9	808	2	1	34	IF	N
JAN 30.81	DEC 31.80	900	845	4	21.2	0	809	2	1	50	HFIL	
FEB 27.81	JAN 30.81	900	800	3	99.4	0	810	2	1	78	FILJ	
MAR 31.81	FEB 27.81	900	800	1	54.9	9	1943	2	1	51		
APR 30.81	MAR 31.81	700	800	3	51.8	0	1884	2	1	52	AH	H
MAY 29.81	APR 30.81	900	800	1	87.0	0	24007	2	1	***	AHG	
JUN 30.81	MAY 29.81	900	800	1	149.0	0	24015	2	1	41	IJFH	NCM
JUL 31.81	JUN 30.81	700	800	1	70.0	0	24027	2	1	86	D	HCM
AUG 31.81	JUL 31.81	900	800	1	127.0	0	24042	2	1	81	BCD	
SEP 30.81	AUG 31.81	900	800	*	101.0	0	24045	2	1	81		
OCT 30.81	SEP 30.81	900	800	3	95.0	0	24061	2	1	***	HG	
NOV 30.81	OCT 30.81	930	900	4	70.0	0	24072	2	1	93	A	
JAN 5.82	NOV 30.81	900	800	*	61.9	0	24085	2	1	***	GHJ	

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
SEP 30.80	SEP 3.80	2485.0	38.5	4.08	0.1090	4.20	0.54	0.37
NOV 3.80	SEP 30.80	1855.0	26.6	4.37	0.0844	3.20	0.62	0.47
NOV 28.80	NOV 3.80	U 635.0	27.4	4.48	0.0736	2.75	0.68	0.73
DEC 31.80	NOV 28.80	U 1210.0	25.1	4.32	0.1056	2.00	0.54	0.24
JAN 30.81	DEC 31.80	350.0	45.2	4.02	0.1270	2.60	1.14	0.38
FEB 27.81	JAN 30.81	2540.0	23.0	4.37	0.0700	1.75	0.42	0.12
MAR 31.81	FEB 27.81	915.0	52.5	4.07	0.1304	5.30	1.00	0.62
APR 30.81	MAR 31.81	885.0	28.0	U 6.53	0.0502	5.70	0.72	0.81
MAY 29.81	APR 30.81	2750.0	25.9	4.35	0.0784	3.05	0.39	0.26
JUN 30.81	MAY 29.81	U 2020.0	U 800.0	U 9.39	0.0	U 50.50	U 0.05	U 92.00
JUL 31.81	JUN 30.81	1965.0	46.7	U 7.24	0.0620	5.15	0.42	0.30
AUG 31.81	JUL 31.81	3350.0	43.0	4.03	0.1220	4.70	0.40	0.27
SEP 30.81	AUG 31.81	2680.0	31.0	4.16	0.0958	3.15	0.33	0.18
OCT 30.81	SEP 30.81	2251.0	22.6	4.49	0.0658	2.15	0.50	0.65
NOV 30.81	OCT 30.81	2134.0	25.7	4.24	0.0944	2.30	0.50	0.20
JAN 5.82	NOV 30.81	1112.0	10.7	4.90	0.0534	0.90	0.23	0.29

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DALHOUSIE MILLS/CUMULATIVE/WET #16

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
SEP 30.80	SEP 3.80	0.08	0.64	0.060	0.030	0.030	0.470	0.011
NOV 3.80	SEP 30.80	0.23	0.67	0.080	0.130	0.100	0.390	0.020
NOV 28.80	NOV 3.80	0.34	1.03	0.130	0.220	0.200	0.450	0.033
DEC 31.80	NOV 28.80	0.22	0.46	0.020	0.040	0.130	0.268	0.007
JAN 30.81	DEC 31.80	0.65	0.35	0.034	0.080	0.470	0.298	0.004
FEB 27.81	JAN 30.81	0.23	0.40	0.015	0.040	0.140	0.222	0.004
MAR 31.81	FEB 27.81	0.35	1.06	0.090	0.040	0.220	0.740	0.014
APR 30.81	MAR 31.81	0.34	U 3.45	0.125	U 0.360	U 0.250	U 1.930	0.068
MAY 29.81	APR 30.81	0.14	0.61	0.045	0.050	0.050	0.450	0.020
JUN 30.81	MAY 29.81	U 23.20	1.02	U *****	U 1.800	U *****	0.064	0.092
JUL 31.81	JUN 30.81	0.29	U 5.28	0.055	U 0.450	U 0.210	U 2.000	U 0.382
AUG 31.81	JUL 31.81	0.16	0.80	0.040	0.100	0.090	0.430	0.054
SEP 30.81	AUG 31.81	0.07	0.27	0.035	0.030	0.040	0.262	0.017
OCT 30.81	SEP 30.81	0.14	0.27	0.035	0.050	U 0.080	0.216	U 0.063
NOV 30.81	OCT 30.81	0.09	0.48	0.010	0.040	0.050	0.360	0.022
JAN 5.82	NOV 30.81	0.22	0.22	0.025	0.100	0.090	0.164	0.004

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINIUM MG/L
SEP 30.80	SEP 3.80	0.004	< 0.001	0.007	0.081	0.007	< 0.002	0.044
NOV 3.80	SEP 30.80	0.007	< 0.001	0.019	0.051	U 0.030	< 0.002	< 0.044
NOV 28.80	NOV 3.80	0.019	0.005	U 0.070	U 0.668	U 0.051	0.003	0.749
DEC 31.80	NOV 28.80	0.004	< 0.001	0.019	0.049	0.010	< 0.002	< 0.011
JAN 30.81	DEC 31.80	*****	*****	*****	*****	*****	*****	*****
FEB 27.81	JAN 30.81	0.005	< 0.001	0.011	0.037	0.008	< 0.002	< 0.022
MAR 31.81	FEB 27.81	< 0.001	< 0.001	0.012	0.105	0.011	< 0.002	0.080
APR 30.81	MAR 31.81	0.016	< 0.001	0.014	0.428	0.009	< 0.002	0.323
MAY 29.81	APR 30.81	0.003	< 0.001	0.007	0.046	0.007	< 0.002	0.051
JUN 30.81	MAY 29.81	0.003	< 0.001	L 0.005	L 0.016	0.007	< 0.002	L 0.027
JUL 31.81	JUN 30.81	< 0.001	< 0.001	J 0.211	U 0.402	0.007	< 0.002	U 0.410
AUG 31.81	JUL 31.81	0.003	< 0.001	0.007	0.023	U 0.023	< 0.002	0.013
SEP 30.81	AUG 31.81	0.003	< 0.001	0.007	0.023	0.005	< 0.002	0.009
OCT 30.81	SEP 30.81	0.005	0.001	0.018	0.051	0.004	< 0.002	0.016
NOV 30.81	OCT 30.81	0.003	0.001	0.005	0.025	0.012	< 0.002	0.010
JAN 5.82	NOV 30.81	0.004	< 0.001	0.016	0.033	0.008	< 0.002	0.024

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DALHOUSIE MILLS/CUMULATIVE/WET #16

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM MG/L	FREE H+ MG/L
SEP 30,80	SEP 3,80	0.004	0.0001	0.0832
NOV 3,80	SEP 30,80	< 0.016	0.0001	0.0427
NOV 28,80	NOV 3,80	U 0.094	U 0.0094	0.0331
DEC 31,80	NOV 28,80	0.004	0.0002	0.0479
JAN 30,81	DEC 31,80	*****	******	0.0455
FEB 27,81	JAN 30,81	U 0.005	U 0.0018	0.0427
MAR 31,81	FEB 27,81	0.003	0.0001	0.0851
APR 30,81	MAR 31,81	0.021	0.0013	U 0.0003
MAY 29,81	APR 30,81	0.006	< 0.0002	0.0447
JUN 30,81	MAY 29,81	L 0.001	< 0.0001	U 0.0000
JUL 31,81	JUN 30,81	0.002	0.0002	U 0.0001
AUG 31,81	JUL 31,81	0.001	0.0001	0.0933
SEP 30,81	AUG 31,81	0.002	0.0002	0.0692
OCT 30,81	SEP 30,81	0.008	0.0008	0.0324
NOV 30,81	OCT 30,81	0.003	0.0002	0.0575
JAN 5,82	NOV 30,81	0.006	U 0.0066	0.0126

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GOLDEN LAKE/CUMULATIVE/#FT #17

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 09-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
SEP 30.80	SEP 2.80	915	915	1	80.0	9	811	2	1	22	A	N
NOV 1.80	SEP 30.80	915	800	1	116.0	9	812	2	1	85	AR	M
DEC 1.80	NOV 1.80	****	****	3	69.7	0	813	2	1	52		
DEC 31.80	DEC 1.80	1430	810	3	62.7	0	814	2	1	***	GH	N
JAN 30.81	DEC 31.80	815	830	2	20.6	9	815	2	1	62		
FEB 27.81	JAN 30.81	845	845	4	89.6	0	816	2	1	70	H	
MAR 31.81	FEB 27.81	850	810	1	60.7	9	1942	2	1	44	A	NC
APR 29.81	MAR 31.81	810	715	1	62.0	0	1888	2	1	33	FACD	N
MAY 29.81	APR 30.81	745	735	1	71.8	9	24003	2	1	45	ABD	N
JUN 30.81	MAY 29.81	740	730	1	98.6	9	24024	2	1	***	GFIAD	NC
JUL 31.81	JUN 30.81	745	900	1	34.0	0	24034	2	1	278		N
AUG 31.81	JUL 31.81	915	1030	1	120.0	0	24040	2	1	68	A	
SEP 30.81	AUG 31.81	1045	1430	*	140.0	0	24049	2	1	81	D	
OCT 30.81	SEP 30.81	1445	800	3	60.0	0	24063	2	1	72		
NOV 30.81	OCT 30.81	830	745	4	44.0	9	24074	2	1	86		
JAN 5.82	NOV 30.81	810	920	3	77.3	0	24083	2	1	***	GH	N

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
SEP 30.80	SEP 2.80	U 585.0	39.6	4.07	0.1120	4.35	0.62	0.27
NOV 1.80	SEP 30.80	3225.0	11.8	U 5.45	0.0416	1.45	0.12	U 1.67
DEC 1.80	NOV 1.80	1195.0	34.5	4.13	0.1138	2.35	0.69	0.13
DEC 31.80	DEC 1.80	U 160.0	U 8.6	4.85	******	0.25	0.20	*****
JAN 30.81	DEC 31.80	420.0	43.0	4.04	0.1288	1.75	0.96	0.15
FEB 27.81	JAN 30.81	2055.0	22.3	4.33	0.0788	1.40	0.39	0.07
MAR 31.81	FEB 27.81	U 885.0	57.0	4.14	0.1130	3.40	0.60	0.46
APR 29.81	MAR 31.81	U 675.0	41.0	4.22	0.1062	5.60	0.82	0.97
MAY 29.81	APR 30.81	U 1060.0	35.8	4.29	0.0944	4.20	0.53	0.35
JUN 30.81	MAY 29.81	U 450.0	40.6	4.10	0.1316	5.00	0.60	0.61
JUL 31.81	JUN 30.81	3075.0	37.4	4.12	0.1084	4.35	0.29	0.14
AUG 31.81	JUL 31.81	2660.0	42.5	4.03	0.1254	4.35	0.36	0.09
SEP 30.81	AUG 31.81	3720.0	33.6	4.16	0.0988	3.15	0.34	0.05
OCT 30.81	SEP 30.81	1406.0	30.0	4.22	0.0932	2.30	0.41	0.10
NOV 30.81	OCT 30.81	1236.0	30.6	4.22	0.1022	2.65	0.48	0.16
JAN 5.82	NOV 30.81	U 1240.0	26.2	4.26	0.0976	1.60	0.51	0.13

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GOLDEN LAKE/CUMULATIVE/WET #17

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
SEP 30.80	SEP 2.80	0.09	1.05	0.040	0.030	0.030	0.540	0.030
NOV 1.80	SEP 30.80	0.20	0.47	0.115	0.290	0.140	0.106	0.045
DEC 1.80	NOV 1.80	0.16	0.53	0.015	0.060	0.050	0.390	0.003
DEC 31.80	DEC 1.80	0.02	*****	*****	*****	*****	0.086	*****
JAN 30.81	DEC 31.80	0.22	0.27	0.020	0.020	0.050	0.090	< 0.001
FEB 27.81	JAN 30.81	0.15	0.20	0.015	0.010	0.080	0.120	0.003
MAR 31.81	FEB 27.81	0.23	0.67	0.060	< 0.010	0.110	0.200	0.007
APR 29.81	MAR 31.81	0.39	1.05	0.160	0.090	0.130	0.770	0.032
MAY 29.81	APR 30.81	0.66	1.08	0.065	0.420	U 0.410	0.520	0.058
JUN 30.81	MAY 29.81	0.18	U 5.21	0.130	0.350	0.210	0.790	0.162
JUL 31.81	JUN 30.81	0.06	0.52	0.025	0.020	0.010	0.430	0.007
AUG 31.81	JUL 31.81	0.13	0.48	0.020	0.030	0.030	0.370	0.018
SEP 30.81	AUG 31.81	0.05	0.40	0.025	0.020	0.020	0.266	0.050
OCT 30.81	SEP 30.81	0.06	0.17	0.005	0.020	0.020	0.136	0.005
NOV 30.81	OCT 30.81	0.04	0.37	0.010	0.030	0.050	0.288	0.005
JAN 5.82	NOV 30.81	0.14	0.24	0.035	0.030	0.090	0.152	0.005

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINIUM MG/L
SEP 30.80	SEP 2.80	0.003	0.001	< 0.004	0.080	0.010	< 0.002	0.047
NOV 1.80	SEP 30.80	0.005	< 0.001	0.004	< 0.015	0.003	< 0.002	< 0.009
DEC 1.80	NOV 1.80	0.003	< 0.001	0.009	0.067	0.015	< 0.002	< 0.042
DEC 31.80	DEC 1.80	*****	*****	*****	*****	*****	*****	*****
JAN 30.81	DEC 31.80	*****	*****	*****	*****	*****	*****	*****
FEB 27.81	JAN 30.81	0.002	< 0.001	0.009	0.020	0.005	< 0.002	0.018
MAR 31.81	FEB 27.81	0.004	< 0.001	0.006	0.064	0.006	< 0.002	0.043
APR 29.81	MAR 31.81	0.016	< 0.001	L 0.009	L 0.536	0.015	< 0.002	L 0.519
MAY 29.81	APR 30.81	0.005	< 0.001	< 0.015	0.090	0.007	0.002	0.064
JUN 30.81	MAY 29.81	*****	*****	*****	*****	*****	*****	*****
JUL 31.81	JUN 30.81	0.001	< 0.001	0.003	0.027	0.010	< 0.002	0.022
AUG 31.81	JUL 31.81	0.002	< 0.001	0.007	0.022	0.008	< 0.002	0.007
SEP 30.81	AUG 31.81	0.002	< 0.001	0.006	0.011	0.005	< 0.002	0.005
OCT 30.81	SEP 30.81	0.001	< 0.001	0.014	0.016	0.007	< 0.002	< 0.009
NOV 30.81	OCT 30.81	0.006	0.001	0.012	0.021	0.015	< 0.002	0.010
JAN 5.82	NOV 30.81	< 0.001	< 0.001	0.021	0.013	0.006	< 0.002	0.007

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GOLDEN LAKE/CUMULATIVE/#FT #17

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM MG/L	FREE H+ MG/L
SEP 30.80	SEP 2.80	0.002	0.0004	0.0851
NOV 1.80	SEP 30.80	< 0.001	0.0003	U 0.0004
DEC 1.80	NOV 1.80	< 0.004	0.0011	0.0741
DEC 31.80	DEC 1.80	*****	******	0.0141
JAN 30.81	DEC 31.80	*****	******	0.0912
FEB 27.81	JAN 30.81	0.002	0.0002	0.0468
MAR 31.81	FEB 27.81	0.002	0.0004	0.0724
APR 29.81	MAR 31.81	L 0.006	0.0003	0.0603
MAY 29.81	APR 30.81	0.009	0.0009	0.0525
JUN 30.81	MAY 29.81	*****	******	0.0794
JUL 31.81	JUN 30.81	0.001	0.0001	0.0759
AUG 31.81	JUL 31.81	0.001	0.0001	0.0933
SEP 30.81	AUG 31.81	0.003	< 0.0001	0.0692
OCT 30.81	SEP 30.81	0.005	0.0001	0.0603
NOV 30.81	OCT 30.81	0.005	0.0003	0.0603
JAN 5.82	NOV 30.81	0.003	< 0.0001	0.0550

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : KALADAR/CUMULATIVE/WET #14

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 09-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
SEP 30.80	SEP 2.80	900	840	1	107.0	9	793	2	1	41	F	M
OCT 31.80	SEP 30.80	805	745	1	111.4	9	794	2	1	86		
NOV 28.80	OCT 31.80	800	1100	2	63.3	0	795	2	1	28	AHFL	NC
DEC 31.80	NOV 28.80	1115	759	2	82.2	0	796	2	1	85		
JAN 30.81	DEC 31.80	805	800	4	17.8	0	797	2	1	56		
FEB 27.81	JAN 30.81	805	800	3	123.4	0	798	2	1	***	GF	
MAR 31.81	FEB 27.81	805	745	1	84.1	0	1947	2	1	4	A	NH
APR 30.81	MAR 31.81	745	755	1	56.3	0	1887	2	1	83	AQ	
MAY 29.81	APR 30.81	850	855	1	90.0	0	24011	2	1	***	AGHI	
JUN 30.81	MAY 29.81	900	830	1	98.0	0	24021	2	1	14		M
JUL 31.81	JUN 30.81	905	855	1	67.0	0	24031	2	1	71		
AUG 31.81	JUL 31.81	900	900	1	110.0	0	24038	2	1	***	GC	
SEP 30.81	AUG 31.81	900	855	*	172.0	0	24051	2	1	75		
OCT 30.81	SEP 30.81	900	800	1	108.0	0	24057	2	1	66	FHI	
NOV 30.81	OCT 30.81	800	802	4	35.0	0	24066	2	1	***	GH	
JAN 5.82	NOV 30.81	800	800	2	77.3	0	24076	2	1	***	JGH	NC

REMOVAL DATE	EXPOSURE DATE		VOLUME ML		CONDUCT. UMHO/CM		PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L		CALCIUM MG/L
SEP 30.80	SEP 2.80	U	1435.0		47.5		3.95	0.1410	4.65	0.76		0.34
OCT 31.80	SEP 30.80		3115.0		23.8		4.30	0.0840	1.95	0.45		0.19
NOV 28.80	OCT 31.80	U	580.0		14.2		5.02	0.0544	1.45	0.32		0.22
DEC 31.80	NOV 28.80		2295.0		23.3		4.32	0.1044	1.70	0.44		0.09
JAN 30.81	DEC 31.80		325.0		54.5		3.89	0.1590	2.20	1.30		0.41
FEB 27.81	JAN 30.81		2955.0		24.6		4.27	0.0806	2.10	0.39		0.08
MAR 31.81	FEB 27.81	U	130.0		*****	U	6.50	******	5.10	0.69	U	1.55
APR 30.81	MAR 31.81		1535.0		38.0		4.19	0.0960	4.75	0.67		0.41
MAY 29.81	APR 30.81		2030.0		18.4		5.05	0.0332	3.20	0.49		0.07
JUN 30.81	MAY 29.81	U	450.0		35.3		4.27	0.0994	5.10	0.54		0.37
JUL 31.81	JUN 30.81		1555.0		50.1		4.04	0.1360	5.15	0.61		0.30
AUG 31.81	JUL 31.81		1880.0		49.5		3.99	0.1404	5.05	0.50		0.23
SEP 30.81	AUG 31.81		4230.0		41.0		4.06	0.1178	4.10	0.52		0.18
OCT 30.81	SEP 30.81		2336.0		29.7		4.15	0.0922	2.60	0.50		0.14
NOV 30.81	OCT 30.81		938.0		28.0		4.28	0.0944	2.35	0.57		0.13
JAN 5.82	NOV 30.81	U	228.0	U	6.5		4.75	******	0.25	0.16		0.04

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : KALADAR/CUMULATIVE/DFT #14

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
SEP 30.80	SEP 2.80	0.15	0.76	0.050	0.030	0.030	0.520	0.006
OCT 31.80	SEP 30.80	0.09	0.35	0.025	0.010	0.040	0.244	0.001
NOV 28.80	OCT 31.80	0.17	1.29	0.030	0.040	0.080	0.380	0.065
DEC 31.80	NOV 28.80	0.44	0.29	0.010	0.020	0.280	0.212	0.004
JAN 30.81	DEC 31.80	0.52	0.23	0.015	0.020	0.190	0.188	0.004
FEB 27.81	JAN 30.81	0.44	0.32	0.020	0.010	0.300	0.186	0.003
MAR 31.81	FEB 27.81	0.43	*****	J 0.700	0.020	0.270	0.550	*****
APR 30.81	MAR 31.81	0.20	0.75	0.100	0.060	0.130	0.590	0.010
MAY 29.81	APR 30.81	0.36	0.44	0.100	0.250	0.330	0.430	0.017
JUN 30.81	MAY 29.81	0.15	1.41	0.065	0.170	0.130	0.980	0.088
JUL 31.81	JUN 30.81	0.15	0.59	0.060	0.040	0.040	0.500	0.009
AUG 31.81	JUL 31.81	0.11	0.58	0.025	0.030	0.020	0.520	0.048
SEP 30.81	AUG 31.81	0.08	0.40	0.045	0.070	0.040	0.420	0.032
OCT 30.81	SEP 30.81	0.08	0.39	0.005	0.070	0.030	0.288	0.010
NOV 30.81	OCT 30.81	0.31	0.55	0.030	0.040	0.140	0.346	0.035
JAN 5.82	NOV 30.81	0.21	*****	0.005	0.020	0.020	0.166	*****

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINUM MG/L
SEP 30.80	SEP 2.80	0.004	0.008	0.021	0.091	0.012	< 0.002	0.090
OCT 31.80	SEP 30.80	0.002	< 0.001	0.005	< 0.008	0.007	< 0.002	< 0.009
NOV 28.80	OCT 31.80	0.006	0.003	0.020	0.355	0.016	< 0.002	0.192
DEC 31.80	NOV 28.80	0.002	< 0.001	0.008	0.028	0.010	< 0.002	< 0.010
JAN 30.81	DEC 31.80	*****	*****	*****	*****	*****	*****	*****
FEB 27.81	JAN 30.81	0.001	0.001	0.009	0.028	0.008	< 0.002	0.013
MAR 31.81	FEB 27.81	*****	*****	*****	*****	*****	*****	*****
APR 30.81	MAR 31.81	0.008	< 0.001	0.012	0.173	0.005	< 0.002	0.160
MAY 29.81	APR 30.81	*****	*****	*****	*****	*****	*****	*****
JUN 30.81	MAY 29.81	*****	*****	*****	*****	*****	*****	*****
JUL 31.81	JUN 30.81	0.003	< 0.001	0.009	0.041	0.008	< 0.002	0.045
AUG 31.81	JUL 31.81	0.003	< 0.001	J 0.036	0.031	0.010	< 0.002	0.016
SEP 30.81	AUG 31.81	0.003	< 0.001	0.005	0.015	0.008	< 0.002	0.006
OCT 30.81	SEP 30.81	0.002	< 0.001	0.005	0.020	0.009	< 0.002	0.025
NOV 30.81	OCT 30.81	0.002	< 0.001	0.005	U 0.039	0.012	< 0.002	0.016
JAN 5.82	NOV 30.81	*****	*****	*****	*****	*****	*****	*****

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : KALADAR/CUMULATIVE/WET #14

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM MG/L	FREE H+ MG/L
SEP 30.80	SEP 2.80	0.003	0.0002	0.1122
OCT 31.80	SEP 30.80	< 0.001	0.0002	0.0501
NOV 28.80	OCT 31.80	0.003	0.0007	0.0095
DEC 31.80	NOV 28.80	0.001	< 0.0001	0.0479
JAN 30.81	DEC 31.80	*****	******	0.1288
FEB 27.81	JAN 30.81	0.002	< 0.0001	0.0537
MAR 31.81	FEB 27.81	*****	******	U 0.0003
APR 30.81	MAR 31.81	0.016	0.0003	0.0646
MAY 29.81	APR 30.81	*****	******	0.0089
JUN 30.81	MAY 29.81	*****	******	0.0537
JUL 31.81	JUN 30.81	0.002	0.0001	0.0912
AUG 31.81	JUL 31.81	0.002	0.0001	0.1023
SEP 30.81	AUG 31.81	0.003	< 0.0001	0.0871
OCT 30.81	SEP 30.81	L< 0.001	< 0.0001	0.0708
NOV 30.81	OCT 30.81	0.004	0.0003	0.0525
JAN 5.82	NOV 30.81	*****	******	0.0178

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SMITH'S FALLS/CUMULATIVE/WET #15

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 09-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
SEP 30.80	SEP 3.80	1600	900	1	88.0	0	799	2	1	48	FI	N
OCT 31.80	SEP 30.80	900	915	1	92.0	0	800	2	1	53	CF	H
NOV 28.80	OCT 31.80	930	930	3	68.1	9	801	2	1	***	FGLE	
DEC 31.80	NOV 28.80	930	1430	4	58.0	0	802	2	1	75	FHI	
JAN 30.81	DEC 31.80	1430	915	4	12.1	0	803	2	1	45		N
FEB 27.81	JAN 30.81	915	945	4	92.5	0	804	2	1	82		
MAR 31.81	FEB 27.81	945	945	1	25.9	0	1946	2	1	72		
APR 30.81	MAR 31.81	945	945	1	57.6	0	1890	2	1	47	H	N
MAY 29.81	APR 30.81	800	1530	*	88.2	9	12007	2	1	***	AB DGH	NH
JUN 30.81	MAY 29.81	1550	945	1	125.0	0	24019	2	1	72	ADB	
JUL 31.81	JUN 30.81	945	945	1	92.0	0	24029	2	1	66	A	H
AUG 31.81	JUL 31.81	945	1045	1	110.8	0	24044	2	1	72	A	
SEP 30.81	AUG 31.81	1045	1045	*	189.5	0	24053	2	1	21	A	N
OCT 30.81	SEP 30.81	1045	945	1	127.0	0	24055	2	1	***	AHG	
NOV 30.81	OCT 30.81	945	1030	4	30.1	0	24068	2	1	106		
JAN 5.82	NOV 30.81	1030	1030	4	59.6	0	24082	2	1	***	HGAO	NH

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH LAB	TOTAL H+ TO PH8.3 UG/L	SULPHATE UG/L	NITRATE AS N UG/L	CALCIUM UG/L
SEP 30.80	SEP 3.80	U 1375.0	40.0	4.03	0.1152	4.30	0.53	0.30
OCT 31.80	SEP 30.80	1605.0	14.4	U 5.36	0.0356	3.05	0.43	U 1.17
NOV 28.80	OCT 31.80	******	*****	*****	******	*****	*****	*****
DEC 31.80	NOV 28.80	1420.0	18.0	U 5.77	0.0570	2.35	0.56	0.97
JAN 30.81	DEC 31.80	U 180.0	*****	3.99	******	3.90	1.39	0.62
FEB 27.81	JAN 30.81	2480.0	20.0	4.42	0.0634	1.50	0.38	0.19
MAR 31.81	FEB 27.81	610.0	51.0	4.12	0.1220	5.10	1.04	0.96
APR 30.81	MAR 31.81	U 885.0	28.2	4.67	0.0617	5.00	0.78	U 1.22
MAY 29.81	APR 30.81	U 200.0	*****	U 5.48	******	2.35	0.38	0.98
JUN 30.81	MAY 29.81	2940.0	27.0	4.68	0.0544	5.35	0.57	U 1.22
JUL 31.81	JUN 30.81	1975.0	18.4	U 5.80	0.0320	4.20	0.39	U 1.06
AUG 31.81	JUL 31.81	2600.0	33.6	4.30	0.0970	4.55	0.49	0.68
SEP 30.81	AUG 31.81	U 1320.0	28.9	4.31	0.0844	3.40	0.34	0.31
OCT 30.81	SEP 30.81	2765.0	15.2	5.09	0.0420	2.15	0.46	0.72
NOV 30.81	OCT 30.81	1043.0	31.7	4.24	0.0954	2.65	0.72	0.38
JAN 5.82	NOV 30.81	U 947.0	13.9	U 5.24	0.0458	1.65	0.41	0.98

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SMITH'S FALLS/CUMULATIVE/WET #15 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
SEP 30.80	SEP 3.80	0.08	0.56	0.080	0.030	0.030	0.420	0.004
OCT 31.80	SEP 30.80	0.22	0.59	J 0.320	0.100	0.130	0.384	0.008
NOV 28.80	OCT 31.80	*****	*****	*****	*****	*****	*****	*****
DEC 31.80	NOV 28.80	U 1.01	0.86	J 0.295	U 0.290	U 0.810	0.332	U 0.043
JAN 30.81	DEC 31.80	0.74	0.37	U 0.220	0.090	0.540	0.254	0.006
FEB 27.81	JAN 30.81	0.30	0.23	U 0.055	0.010	0.190	0.140	0.003
MAR 31.81	FEB 27.81	0.52	1.01	0.260	0.070	0.340	0.450	0.031
APR 30.81	MAR 31.81	0.22	1.10	U 0.330	0.060	0.130	0.820	0.019
MAY 29.81	APR 30.81	0.16	*****	J 0.360	0.050	0.060	0.420	*****
JUN 30.81	MAY 29.81	0.15	0.70	U 0.425	0.070	0.110	0.560	0.018
JUL 31.81	JUN 30.81	0.13	0.64	J 0.435	0.070	0.050	0.490	0.024
AUG 31.81	JUL 31.81	0.17	0.60	J 0.265	0.040	0.060	0.460	0.031
SEP 30.81	AUG 31.81	0.08	1.25	0.110	0.040	0.020	0.376	0.117
OCT 30.81	SEP 30.81	0.08	0.28	U 0.275	0.050	0.020	0.200	0.010
NOV 30.81	OCT 30.81	0.14	0.50	0.115	0.040	0.070	0.334	0.022
JAN 5.82	NOV 30.81	0.40	0.35	J 0.395	0.170	0.270	0.132	U 0.039

REMOVAL DATE	EXPOSURE DATE	MANGANESE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINUM MG/L
SEP 30.80	SEP 3.80	0.005	0.003	0.019	0.103	0.009	< 0.002	0.090
OCT 31.80	SEP 30.80	U 0.016	0.003	0.014	0.092	0.008	< 0.002	< 0.059
NOV 28.80	OCT 31.80	*****	*****	*****	*****	*****	*****	*****
DEC 31.80	NOV 28.80	U 0.011	0.001	0.037	0.094	0.014	< 0.002	0.022
JAN 30.81	DEC 31.80	*****	*****	*****	*****	*****	*****	*****
FEB 27.81	JAN 30.81	0.001	< 0.001	0.010	0.017	0.004	< 0.002	0.031
MAR 31.81	FEB 27.81	0.008	< 0.001	0.023	0.066	0.013	< 0.002	0.044
APR 30.81	MAR 31.81	0.011	< 0.001	0.015	0.144	0.008	< 0.002	0.166
MAY 29.81	APR 30.81	*****	*****	*****	*****	*****	*****	*****
JUN 30.81	MAY 29.81	0.008	0.003	L 0.015	L 0.060	0.008	< 0.002	L 0.024
JUL 31.81	JUN 30.81	0.006	< 0.001	0.006	0.076	0.007	< 0.002	0.066
AUG 31.81	JUL 31.81	0.005	< 0.001	0.006	0.037	0.011	< 0.002	0.014
SEP 30.81	AUG 31.81	0.004	< 0.001	0.005	U 0.071	0.007	< 0.002	U 0.031
OCT 30.81	SEP 30.81	0.004	< 0.001	0.013	0.057	0.008	< 0.002	0.034
NOV 30.81	OCT 30.81	0.003	< 0.001	0.008	0.023	0.012	< 0.002	0.009
JAN 5.82	NOV 30.81	0.006	< 0.001	0.015	0.023	0.006	< 0.002	0.014

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SMITH'S FALLS/CUMULATIVE/WET #15

REMOVAL DATE	EXPOSURE DATE		COPPER MG/L		CADMIUM MG/L		FREE H+ MG/L
SEP 30.80	SEP 3.80		0.002		0.0003		0.0933
OCT 31.80	SEP 30.80		0.012		0.0003	U	0.0004
NOV 28.80	OCT 31.80		*****		******		******
DEC 31.80	NOV 28.80		0.005	<	0.0001	U	0.0017
JAN 30.81	DEC 31.80		*****		******		0.1047
FEB 27.81	JAN 30.81		0.002	<	0.0001		0.0380
MAR 31.81	FEB 27.81		0.005	<	0.0001		0.0759
APR 30.81	MAR 31.81		0.009	<	0.0010		0.0214
MAY 29.81	APR 30.81		*****		******	U	0.0003
JUN 30.81	MAY 29.81	L	0.001		0.0001		0.0209
JUL 31.81	JUN 30.81		0.001		0.0001	U	0.0016
AUG 31.81	JUL 31.81		0.001		0.0001		0.0501
SEP 30.81	AUG 31.81		0.008		0.0001		0.0490
OCT 30.81	SEP 30.81	L<	0.001	<	0.0001		0.0081
NOV 30.81	OCT 30.81		0.004		0.0005		0.0575
JAN 5.82	NOV 30.81		0.006	<	0.0001	U	0.0006

PART VI

NORTHEASTERN REGION

CUMULATIVE PRECIPITATION CHEMISTRY LISTINGS

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : ATTAWAPISKAT/CUMULATIVE/WET #28

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 09-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
OCT 1.80	SEP 2.80	945	955	1	161.0	9	858	2	1	55	A	HC
OCT 31.80	SEP 30.80	945	1315	3	105.0	9	859	2	1	29		NH
NOV 30.80	OCT 31.80	****	****	*	37.4	9	2208	2	1	***		X
DEC 31.80	NOV 30.80	1245	1415	2	40.6	9	860	2	1	1		H
JAN 30.81	DEC 31.80	1415	1220	2	24.7	9	861	2	1	***	EF	
FEB 27.81	JAN 30.81	1220	1245	3	48.7	9	862	2	1	37	H	N
MAR 31.81	FEB 27.81	1245	1415	2	26.3	9	1936	2	1	***	GH	N
APR 30.81	MAR 31.81	1415	1245	3	34.9	9	1915	2	1	33	CD	NH
MAY 31.81	APR 30.81	1245	1245	1	20.0	0	11169	2	1	50	CD	HCM
JUN 30.81	MAY 31.81	1245	1030	1	71.3	9	11172	2	1	35	ADFI	N
AUG 1.81	JUL 1.81	1330	1530	1	79.7	9	11009	2	1	27	D	HCM
AUG 31.81	AUG 1.81	1530	1330	1	67.5	9	11174	2	1	22	ACD	NH
OCT 30.81	SEP 1.81	1330	1345	1	221.2	9	11180	2	1	***	ACGH	N
DEC 7.81	OCT 30.81	1345	1500	2	53.0	9	11181	2	1	23	C	N
JAN 9.82	DEC 7.81	1500	1330	2	41.3	9	11183	2	1	27	C	NH

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH LAB	TOTAL H+ TO PH9.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
OCT 1.80	SEP 2.80	2908.0	10.4	U 6.69	0.0228	0.80	0.07	0.90
OCT 31.80	SEP 30.80	U 1010.0	17.2	4.72	0.0602	1.74	0.20	0.30
NOV 30.80	OCT 31.80	******	*****	*****	******	*****	*****	*****
DEC 31.80	NOV 30.80	U 16.0	*****	U 5.86	******	*****	*****	*****
JAN 30.81	DEC 31.80	******	*****	*****	******	*****	*****	*****
FEB 27.81	JAN 30.81	U 595.0	12.3	4.72	0.0476	1.25	0.17	0.19
MAR 31.81	FEB 27.81	U 14.0	*****	U 6.62	******	*****	*****	*****
APR 30.81	MAR 31.81	U 380.0	13.4	U 5.54	0.0284	2.00	0.24	0.93
MAY 31.81	APR 30.81	330.0	24.6	U 7.04	0.0370	1.65	0.16	U 2.74
JUN 30.81	MAY 31.81	U 830.0	U 48.1	3.99	U 0.7758	1.45	0.12	0.77
AUG 1.81	JUL 1.81	U 700.0	U 4.8	5.47	0.0309	0.30	0.03	0.24
AUG 31.81	AUG 1.81	U 500.0	U 9.5	5.39	0.0360	1.15	0.14	0.42
OCT 30.81	SEP 1.81	U 220.0	18.4	U 6.84	0.0310	*****	*****	U 1.38
DEC 7.81	OCT 30.81	U 407.0	27.0	4.41	0.0866	2.75	0.45	0.44
JAN 9.82	DEC 7.81	U 371.0	12.3	U 5.10	0.0286	1.20	0.42	U 1.10

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : ATTAWAPISKAT/CUMULATIVE/WET #28

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
OCT 1.80	SEP 2.80	U 0.39	0.38	0.020	0.030	U 0.210	0.214	0.005
OCT 31.80	SEP 30.80	U 0.84	0.53	0.090	0.040	U 0.520	0.356	0.002
NOV 30.80	OCT 31.80	*****	*****	*****	*****	*****	*****	*****
DEC 31.80	NOV 30.80	*****	*****	*****	*****	*****	*****	*****
JAN 30.81	DEC 31.80	*****	*****	*****	*****	*****	*****	*****
FEB 27.81	JAN 30.81	0.11	0.33	0.020	0.020	0.040	0.142	0.003
MAR 31.81	FEB 27.81	*****	*****	*****	*****	*****	*****	*****
APR 30.81	MAR 31.81	0.42	U 1.32	U 0.225	0.060	0.250	0.720	U 0.0
MAY 31.81	APR 30.81	0.21	0.53	U 0.540	0.020	0.120	0.850	0.010
JUN 30.81	MAY 31.81	U 3.40	0.35	0.145	0.030	0.040	0.120	0.010
AUG 1.81	JUL 1.81	< 0.01	0.16	0.040	< 0.010	0.010	0.074	0.005
AUG 31.81	AUG 1.81	0.10	0.67	0.065	0.070	0.020	0.400	0.006
OCT 30.81	SEP 1.81	*****	*****	U 0.455	0.080	U 0.370	U 0.580	*****
DEC 7.81	OCT 30.81	U 1.17	0.55	0.140	U 0.040	U 0.620	0.410	0.007
JAN 9.82	DEC 7.81	U 0.77	0.34	U 0.165	U 0.170	U 0.380	0.152	0.009

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINUM MG/L
OCT 1.80	SEP 2.80	0.001	< 0.001	0.005	0.040	0.001	< 0.002	0.034
OCT 31.80	SEP 30.80	0.003	0.001	0.032	0.039	0.005	< 0.002	0.013
NOV 30.80	OCT 31.80	*****	*****	*****	*****	*****	*****	*****
DEC 31.80	NOV 30.80	*****	*****	*****	*****	*****	*****	*****
JAN 30.81	DEC 31.80	*****	*****	*****	*****	*****	*****	*****
FEB 27.81	JAN 30.81	0.003	< 0.001	L< 0.009	L 0.016	0.002	< 0.002	L< 0.013
MAR 31.81	FEB 27.81	*****	*****	*****	*****	*****	*****	*****
APR 30.81	MAR 31.81	*****	*****	*****	*****	*****	*****	*****
MAY 31.81	APR 30.81	*****	*****	*****	*****	*****	*****	*****
JUN 30.81	MAY 31.81	0.004	< 0.001	0.014	0.073	0.008	< 0.002	0.057
AUG 1.81	JUL 1.81	< 0.001	< 0.001	0.003	0.027	0.002	< 0.002	< 0.012
AUG 31.81	AUG 1.81	0.004	0.004	0.008	0.021	0.005	< 0.002	0.018
OCT 30.81	SEP 1.81	*****	*****	*****	*****	*****	*****	*****
DEC 7.81	OCT 30.81	*****	*****	*****	*****	*****	*****	*****
JAN 9.82	DEC 7.81	*****	*****	*****	*****	*****	*****	*****

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : ATTAWAPISKAT/CUMULATIVE/WET #28

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM MG/L	FREE H+ MG/L
OCT 1.80	SEP 2.80	0.001	< 0.0001	U 0.0002
OCT 31.80	SEP 30.80	0.012	0.0002	0.0191
NOV 30.80	OCT 31.80	*****	******	******
DEC 31.80	NOV 30.80	*****	******	U 0.0014
JAN 30.81	DEC 31.80	*****	******	******
FEB 27.81	JAN 30.81	L< 0.004	< 0.0001	0.0191
MAR 31.81	FEB 27.81	*****	******	U 0.0002
APR 30.81	MAR 31.81	*****	******	U 0.0003
MAY 31.81	APR 30.81	*****	******	U 0.0001
JUN 30.81	MAY 31.81	0.008	< 0.0001	0.1023
AUG 1.81	JUL 1.81	0.015	< 0.0001	0.0034
AUG 31.81	AUG 1.81	0.003	0.0005	0.0041
OCT 30.81	SEP 1.81	*****	******	U 0.0001
DEC 7.81	OCT 30.81	*****	******	0.0389
JAN 9.82	DEC 7.81	*****	******	U 0.0008

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : BEAR ISLAND/CUMULATIVE/WET #24

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 09-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
JUL 3.80	MAY 29.80	****	****	1	*****	*	2211	2	1	***		
JUL 30.80	JUL 3.80	****	****	1	89.5	9	2212	2	1	79		
SEP 2.80	JUL 30.80	****	****	1	93.6	9	2213	2	1	85		C
SEP 30.80	SEP 5.80	1000	900	1	84.0	0	835	2	1	145	CD	NC
NOV 20.80	SEP 30.80	900	1045	3	81.0	0	836	2	1	82	CR	
DEC 31.80	NOV 28.80	945	1030	2	52.0	0	837	2	1	38	CH	N
JAN 30.81	DEC 31.80	1000	1055	4	12.0	0	838	2	1	69	D	
FEB 27.81	JAN 30.81	1059	705	2	43.0	0	839	2	1	***	AH	X
MAR 27.81	FEB 27.81	715	930	3	48.0	0	1908	2	1	52	CDFI	
APR 30.81	MAR 27.81	945	1016	3	139.0	0	1912	2	1	93	CD	
MAY 29.81	APR 30.81	1020	940	1	32.0	0	11073	2	1	108	ACD	
JUN 30.81	MAY 29.81	940	1618	1	93.0	0	11076	2	1	32	ACD	N
JUL 31.81	JUN 30.81	1618	1005	1	28.0	9	11077	2	1	63	ABCD	
AUG 31.81	JUL 31.81	1005	2010	1	103.0	0	11079	2	1	99	CD	
SEP 30.81	AUG 31.81	2010	927	1	111.0	0	11081	2	1	53	RD	
OCT 30.81	SEP 30.81	927	1035	1	94.0	0	11083	2	1	83	RCDL	
NOV 30.81	OCT 30.81	1035	1107	2	38.0	9	11085	2	1	***	CDGH	
JAN 5.82	NOV 30.81	1107	955	2	54.0	0	11087	2	1	***	CGH	

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
JUL 3.80	MAY 29.80	2065.0	29.3	4.30	0.0990	4.05	0.40	0.40
JUL 30.80	JUL 3.80	2300.0	41.1	4.10	0.1204	4.25	0.36	0.16
SEP 2.80	JUL 30.80	2610.0	22.5	4.19	0.0754	2.35	0.20	0.06
SEP 30.80	SEP 5.80	3960.0	24.0	4.21	0.0836	2.45	0.27	0.10
NOV 20.80	SEP 30.80	2165.0	15.2	4.51	0.0638	1.40	0.28	0.20
DEC 31.80	NOV 28.80	U 650.0	24.5	4.41	0.0912	2.15	0.44	0.19
JAN 30.81	DEC 31.80	270.0	U 49.4	4.07	******	3.00	0.96	0.13
FEB 27.81	JAN 30.81	******	*****	*****	******	*****	*****	*****
MAR 27.81	FEB 27.81	815.0	11.6	5.08	0.0494	1.65	0.29	0.16
APR 30.81	MAR 27.81	4225.0	26.2	4.41	0.0690	4.05	0.46	0.60
MAY 29.81	APR 30.81	1130.0	33.0	4.17	0.0982	3.90	0.28	0.21
JUN 30.81	MAY 29.81	U 975.0	22.5	4.87	0.0732	4.20	0.40	U 1.02
JUL 31.81	JUN 30.81	575.0	19.0	4.77	0.0630	2.75	0.28	0.17
AUG 31.81	JUL 31.81	3320.0	32.2	4.13	0.1042	3.25	0.28	0.09
SEP 30.81	AUG 31.81	1940.0	31.0	4.13	0.0970	3.10	0.29	0.09
OCT 30.81	SEP 30.81	2554.0	13.4	4.81	0.0516	1.45	0.17	U 0.38
NOV 30.81	OCT 30.81	1131.0	26.9	4.23	0.0962	2.25	0.41	0.11
JAN 5.82	NOV 30.81	1024.0	23.0	4.23	0.0848	1.30	0.50	0.06

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : BEAR ISLAND/CUMULATIVE/WET #24

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
JUL 3.80	MAY 29.80	0.09	*****	0.080	0.260	0.060	0.590	*****
JUL 30.80	JUL 3.80	0.09	*****	0.030	0.030	0.030	0.268	*****
SEP 2.80	JUL 30.80	0.11	*****	0.015	0.020	0.040	0.190	*****
SEP 30.80	SEP 5.80	0.03	0.23	0.010	0.020	0.020	0.208	0.002
NOV 28.80	SEP 30.80	0.05	0.30	0.015	0.040	0.040	0.178	0.010
DEC 31.80	NOV 28.80	0.12	0.56	U 0.115	0.040	0.070	0.264	U 0.007
JAN 30.81	DEC 31.80	0.65	0.82	0.040	U 0.280	U 0.390	0.306	0.011
FEB 27.81	JAN 30.81	*****	*****	*****	*****	*****	*****	*****
MAR 27.81	FEB 27.81	0.31	0.82	0.055	0.080	0.190	0.530	0.020
APR 30.81	MAR 27.81	0.16	0.67	0.085	0.050	0.080	0.600	0.011
MAY 29.81	APR 30.81	0.12	0.45	0.045	0.050	0.090	0.324	0.014
JUN 30.81	MAY 29.81	0.09	1.68	0.080	0.120	0.040	0.690	0.230
JUL 31.81	JUN 30.81	0.25	U 6.31	0.075	0.230	0.150	0.640	U 0.235
AUG 31.81	JUL 31.81	0.06	0.41	0.015	0.050	0.010	0.328	0.012
SEP 30.81	AUG 31.81	0.01	0.27	0.010	0.030	0.010	0.216	0.009
OCT 30.81	SEP 30.81	0.08	0.04	U 0.100	U 0.700	0.020	< 0.002	0.042
NOV 30.81	OCT 30.81	0.02	0.27	0.015	0.020	0.030	0.228	0.007
JAN 5.82	NOV 30.81	0.04	0.18	< 0.005	0.010	0.020	0.110	0.003

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINUM MG/L
JUL 3.80	MAY 29.80	*****	0.001	L 0.012	0.069	0.003	*****	0.057
JUL 30.80	JUL 3.80	*****	< 0.001	L 0.008	0.036	0.016	*****	0.033
SEP 2.80	JUL 30.80	*****	0.001	L 0.007	0.037	0.005	*****	0.018
SEP 30.80	SEP 5.80	0.001	< 0.001	0.002	0.012	0.005	< 0.002	0.015
NOV 28.80	SEP 30.80	0.003	0.001	L 0.005	L 0.044	0.007	< 0.002	L 0.023
DEC 31.80	NOV 28.80	0.003	< 0.001	0.019	0.028	0.008	< 0.002	0.045
JAN 30.81	DEC 31.80	*****	*****	*****	*****	*****	*****	*****
FEB 27.81	JAN 30.81	*****	*****	*****	*****	*****	*****	*****
MAR 27.81	FEB 27.81	0.004	0.002	0.066	0.104	0.010	< 0.002	0.047
APR 30.81	MAR 27.81	0.016	0.002	0.013	0.481	0.007	< 0.002	0.509
MAY 29.81	APR 30.81	0.004	< 0.001	0.015	0.076	0.009	< 0.002	0.042
JUN 30.81	MAY 29.81	0.005	0.002	0.019	U 0.203	0.009	< 0.002	U 0.175
JUL 31.81	JUN 30.81	0.006	< 0.001	0.015	0.032	0.002	< 0.002	0.026
AUG 31.81	JUL 31.81	0.005	< 0.001	0.006	U 0.076	< 0.001	< 0.002	U 0.051
SEP 30.81	AUG 31.81	0.002	< 0.001	0.003	0.024	0.005	< 0.002	0.012
OCT 30.81	SEP 30.81	0.008	< 0.001	0.017	0.012	0.001	< 0.002	0.005
NOV 30.81	OCT 30.81	0.002	< 0.001	0.011	0.039	0.004	< 0.002	0.012
JAN 5.82	NOV 30.81	< 0.001	< 0.001	0.005	0.024	0.004	< 0.002	0.048

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIDS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : HEAR ISLAND/CUMULATIVE/WET #24

REMOVAL DATE	EXPOSURE DATE		COPPER MG/L		CADMIUM MG/L	FREE H+ MG/L
JUL 1.80	MAY 29.80	L	0.002		0.0004	0.0501
JUL 30.80	JUL 3.80	L	0.002		0.0004	0.0794
SEP 2.80	JUL 30.80	L	0.002		0.0016	0.0646
SEP 30.80	SEP 5.80		0.001	<	0.0001	0.0617
NOV 28.80	SEP 30.80	L	0.002		0.0006	0.0309
DEC 31.80	NOV 28.80		0.005	<	0.0001	0.0389
JAN 30.81	DEC 31.80		*****		******	0.0851
FEB 27.81	JAN 30.81		*****		******	******
MAR 27.81	FEB 27.81		0.004		0.0003	0.0083
APR 30.81	MAR 27.81		0.002		0.0002	0.0389
MAY 29.81	APR 30.81		0.004		0.0007	0.0676
JUN 30.81	MAY 29.81	U	0.015		0.0001	0.0135
JUL 31.81	JUN 30.81		0.005		0.0004	0.0170
AUG 31.81	JUL 31.81		0.001	<	0.0001	0.0741
SEP 30.81	AUG 31.81		0.007		0.0002	0.0741
OCT 30.81	SEP 30.81		0.004		0.0003	0.0148
NOV 30.81	OCT 30.81		0.002		0.0006	0.0589
JAN 5.82	NOV 30.81		0.002	<	0.0001	0.0589

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GOWGANDA/CUMULATIVE/WET #25 PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 09-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
JUL 31.80	JUL 3.80	****	****	1	79.3	9	2200	2	1	125		N
AUG 28.80	JUL 31.80	****	****	1	95.2	9	2201	2	1	84		C
SEP 30.80	SEP 2.80	1000	1000	1	121.0	0	846	2	1	92	D	C
OCT 31.80	SEP 30.80	1000	930	1	49.0	0	847	2	1	87	D	
NOV 28.80	OCT 31.80	930	1230	2	27.0	0	848	2	1	76		
DEC 31.80	NOV 30.80	1230	1020	2	31.0	0	849	2	1	10	DH	N
JAN 30.81	DEC 31.80	1020	1215	4	14.0	0	850	2	1	24	DH	N
FEB 27.81	JAN 30.81	1220	905	2	27.0	0	851	2	1	10	CH	N
MAR 31.81	FEB 27.81	900	1020	1	54.0	0	1909	2	1	76	CD	
APR 30.81	MAR 31.81	1020	1330	1	80.0	0	1910	2	1	***	ACGH	
MAY 29.81	APR 30.81	1330	1400	1	27.0	0	11121	2	1	63	ACD	
JUN 30.81	MAY 29.81	1400	1000	1	156.0	0	11124	2	1	65	ACD	
JUL 31.81	JUN 30.81	1000	945	1	43.0	0	11125	2	1	44	CD	N
AUG 31.81	JUL 31.81	945	720	1	89.0	0	11127	2	1	65	CD	
SEP 30.81	AUG 31.81	720	1920	1	49.0	0	11129	2	1	46	DA	N
OCT 30.81	SEP 30.81	1920	1427	1	92.0	0	11131	2	1	***	DGH	N
NOV 30.81	OCT 30.81	1430	1500	4	32.0	0	11133	2	1	***	CDGH	
JAN 8.82	NOV 30.81	1500	1030	2	51.0	0	11135	2	1	***	CGHLF	

REMOVAL DATE	EXPOSURE DATE		VOLUME ML	CONDUCT. UMHO/CM	PH LAB	TOTAL H+ TO PH8.3 MG/L		SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
JUL 31.80	JUL 3.80		3220.0	18.4	4.44	0.0670		1.80	0.18	0.06
AUG 28.80	JUL 31.80		2625.0	20.6	4.21	0.0714		2.50	0.13	0.05
SEP 30.80	SEP 2.80		3650.0	22.0	4.25	0.0806		2.35	0.21	0.18
OCT 31.80	SEP 30.80		1385.0	23.1	4.27	0.0828		2.25	0.30	0.20
NOV 28.80	OCT 31.80		675.0	27.5	4.21	0.1094		2.20	0.53	0.12
DEC 31.80	NOV 30.80	U	105.0	28.9	4.32	******		3.35	0.51	*****
JAN 30.81	DEC 31.80	U	110.0	*****	4.10	******		2.75	0.82	*****
FEB 27.81	JAN 30.81	U	90.0	*****	4.25	******		2.35	0.68	*****
MAR 31.81	FEB 27.81		1335.0	17.3	4.57	0.0628		2.40	0.27	0.13
APR 30.81	MAR 31.81		1725.0	17.8	4.78	0.0458		3.45	0.31	0.75
MAY 29.81	APR 30.81		557.0	54.5	4.01	0.1398	U	7.50	0.50	0.38
JUN 30.81	MAY 29.81		3320.0	23.8	4.89	0.0652		5.00	0.32	0.14
JUL 31.81	JUN 30.81	U	620.0	49.6	4.06	0.1308		5.45	0.52	0.20
AUG 31.81	JUL 31.81		1900.0	32.5	4.12	0.1042		3.80	0.18	0.12
SEP 30.81	AUG 31.81	U	740.0	28.5	4.17	0.0918		3.00	0.20	0.06
OCT 30.81	SEP 30.81	U	368.0	15.8	4.46	0.1018		1.30	0.14	0.06
NOV 30.81	OCT 30.81		832.0	16.5	4.47	0.0752		1.25	0.32	0.12
JAN 8.82	NOV 30.81		844.0	21.6	4.24	0.0838		1.35	0.52	0.10

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GOWGANDA/CUMULATIVE/WET #25

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
JUL 31-80	JUL 3,80	0.03	*****	< 0.025	0.020	< 0.010	0.204	*****
AUG 28-80	JUL 31,80	0.06	*****	0.010	0.010	0.010	0.174	*****
SEP 30-80	SEP 2,80	< 0.01	0.20	0.015	0.010	0.010	0.208	0.001
OCT 31-80	SEP 30,80	0.08	0.24	0.020	0.020	0.050	0.186	0.001
NOV 28-80	OCT 31,80	0.14	0.58	0.015	0.060	0.060	0.340	0.004
DEC 31-80	NOV 30,80	U 0.71	*****	*****	*****	*****	0.328	*****
JAN 30-81	DEC 31,80	0.22	*****	*****	*****	*****	0.296	*****
FEB 27-81	JAN 30,81	0.20	*****	*****	*****	*****	0.350	*****
MAR 31-81	FEB 27,81	0.11	0.60	0.030	0.020	0.070	0.510	0.006
APR 30-81	MAR 31,81	0.12	0.66	0.085	0.080	0.080	0.470	0.022
MAY 29-81	APR 30,81	0.22	1.30	0.115	U 0.020	0.180	0.930	0.152
JUN 30-81	MAY 29,81	0.08	U 3.55	0.040	0.320	0.040	U 1.520	0.250
JUL 31-81	JUN 30,81	0.20	0.82	0.035	0.060	0.070	0.580	0.015
AUG 31-81	JUL 31,81	0.05	0.45	0.015	0.030	< 0.010	0.350	0.008
SEP 30-81	AUG 31,81	0.04	0.35	0.005	0.030	0.030	0.226	0.025
OCT 30-81	SEP 30,81	0.01	0.35	0.005	< 0.010	0.050	0.058	0.022
NOV 30-81	OCT 30,81	0.08	0.30	0.020	0.030	0.070	0.166	0.018
JAN 8-82	NOV 30,81	0.10	0.23	0.010	0.020	0.050	0.156	0.004

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINUM MG/L
JUL 31-80	JUL 3,80	*****	< 0.001	L 0.004	0.018	0.005	*****	0.018
AUG 28-80	JUL 31,80	*****	0.001	L 0.003	0.018	0.005	*****	0.010
SEP 30-80	SEP 2,80	0.001	0.004	0.003	0.011	0.005	< 0.002	0.010
OCT 31-80	SEP 30,80	0.003	0.002	0.016	0.062	0.006	< 0.002	0.029
NOV 28-80	OCT 31,80	0.002	0.001	0.035	0.240	0.013	< 0.002	0.099
DEC 31-80	NOV 30,80	*****	*****	*****	*****	*****	*****	*****
JAN 30-81	DEC 31,80	*****	*****	*****	*****	*****	*****	*****
FEB 27-81	JAN 30,81	*****	*****	*****	*****	*****	*****	*****
MAR 31-81	FEB 27,81	0.004	0.001	0.026	0.094	0.005	< 0.002	0.053
APR 30-81	MAR 31,81	0.013	< 0.001	0.012	0.214	< 0.001	< 0.002	0.203
MAY 29-81	APR 30,81	U 0.020	0.004	J 0.049	U 0.286	U 0.023	< 0.002	U 0.233
JUN 30-81	MAY 29,81	0.004	< 0.001	0.008	0.059	0.007	< 0.002	0.037
JUL 31-81	JUN 30,81	0.007	< 0.001	0.016	U 0.195	0.014	< 0.002	U 0.151
AUG 31-81	JUL 31,81	0.002	0.001	0.006	0.024	0.007	< 0.002	0.022
SEP 30-81	AUG 31,81	0.003	< 0.001	0.004	0.038	0.003	< 0.002	0.010
OCT 30-81	SEP 30,81	*****	*****	*****	*****	*****	*****	*****
NOV 30-81	OCT 30,81	0.002	< 0.001	0.035	0.034	0.005	< 0.002	0.011
JAN 8-82	NOV 30,81	< 0.001	< 0.001	0.004	0.027	0.010	< 0.002	0.030

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GOWGANDA/CUMULATIVE/WET #25

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM MG/L	FREE H+ UG/L
JUL 31.80	JUL 3.80	L 0.002	0.0002	0.0363
AUG 28.80	JUL 31.80	L 0.001	0.0004	0.0617
SEP 30.80	SEP 2.80	0.001	< 0.0001	0.0562
OCT 31.80	SEP 30.80	0.005	0.0004	0.0537
NOV 28.80	OCT 31.80	0.016	0.0007	0.0617
DEC 31.80	NOV 30.80	*****	******	0.0479
JAN 30.81	DEC 31.80	*****	******	0.0794
FEB 27.81	JAN 30.81	*****	******	0.0562
MAR 31.81	FEB 27.81	0.002	0.0006	0.0269
APR 30.81	MAR 31.81	0.003	0.0003	0.0166
MAY 29.81	APR 30.81	0.009	0.0012	0.0977
JUN 30.81	MAY 29.81	0.003	0.0002	0.0129
JUL 31.81	JUN 30.81	0.005	0.0003	0.0871
AUG 31.81	JUL 31.81	0.002	0.0005	0.0759
SEP 30.81	AUG 31.81	< 0.002	0.0002	0.0676
OCT 30.81	SEP 30.81	*****	******	0.0347
NOV 30.81	OCT 30.81	0.003	0.0001	0.0339
JAN 8.82	NOV 30.81	0.005	< 0.0001	0.0550

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIDS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : KILLARNEY/CUMULATIVE/WET #23

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIDS 04-AES	SAMPLE NUMBER	PROJECT CODE 02-APIDS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
JUL 4.80	MAY 28.80	****	****	1	77.0	0	2202	2	1	72		MC
JUL 30.80	JUL 4.80	****	****	1	64.0	9	2203	2	1	78		
SEP 2.80	JUL 30.80	****	****	1	89.6	9	2204	2	1	89	C	C
SEP 30.80	SEP 2.80	930	900	1	114.0	0	823	2	1	78	ACD	
OCT 31.80	SEP 30.80	900	1400	3	51.0	0	824	2	1	105	M	
NOV 28.80	OCT 31.80	1400	1645	2	36.0	0	825	2	1	118	DM	
JAN 5.81	NOV 28.80	1645	1130	2	45.0	0	826	2	1	69	D	
FEB 2.81	JAN 5.81	1130	1330	2	32.0	0	827	2	1	15	CMFI	M
FEB 27.81	FEB 2.81	1330	1150	2	54.0	9	828	2	1	65	MIF	
MAR 31.81	FEB 27.81	1150	1145	1	51.1	4	1940	2	1	59	CD	
MAY 11.81	MAR 31.81	1145	1315	1	51.0	0	1917	2	1	80	ACD	
MAY 29.81	MAY 11.81	1315	1600	1	30.0	0	11025	2	1	45	CD	N
JUN 30.81	MAY 29.81	1600	2000	1	55.0	0	11027	2	1	***	CDGH	N
AUG 4.81	JUN 30.81	2000	1130	1	19.0	0	11029	2	1	35	ACD	NM
AUG 31.81	AUG 4.81	1130	1730	1	101.0	0	11031	2	1	51	C	
OCT 2.81	AUG 31.81	1730	900	1	110.0	0	11033	2	1	75	CD	
OCT 31.81	OCT 2.81	900	1130	1	62.0	0	11035	2	1	90	D	
NOV 30.81	OCT 31.81	1130	1330	3	50.0	0	11037	2	1	74	CD	
JAN 5.92	NOV 30.81	1330	1145	2	66.0	0	11039	2	1	***	CDGH	N

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH LAB	TOTAL H+ TO PH4.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
JUL 4.80	MAY 28.80	1805.0	42.7	U 6.71	0.0772	U 6.40	U 0.76	0.38
JUL 30.80	JUL 4.80	1635.0	37.0	6.13	0.0980	1.95	0.54	U 0.38
SEP 2.80	JUL 30.80	2605.0	48.5	3.91	0.1302	5.15	0.69	U 0.38
SEP 30.80	SEP 2.80	2709.0	29.5	6.18	0.0974	1.05	0.41	0.27
OCT 31.80	SEP 30.80	1745.0	32.1	6.22	0.0990	3.30	0.60	0.58
NOV 28.80	OCT 31.80	1385.0	29.0	6.27	0.0916	2.55	0.71	0.31
JAN 5.81	NOV 28.80	1010.0	26.2	6.25	0.0852	1.90	0.50	0.10
FEB 2.81	JAN 5.81	U 160.0	*****	3.96	******	4.65	U 1.38	0.69
FEB 27.81	FEB 2.81	1150.0	19.9	6.41	0.0658	1.20	0.41	0.04
MAR 31.81	FEB 27.81	980.0	17.3	6.27	0.0948	4.10	U 0.90	0.60
MAY 11.81	MAR 31.81	1325.0	12.4	6.34	0.0838	U 4.80	0.65	0.85
MAY 29.81	MAY 11.81	U 440.0	42.6	6.10	0.1140	5.20	0.64	0.28
JUN 30.81	MAY 29.81	U 630.0	48.0	6.07	0.1360	5.35	0.72	0.52
AUG 4.81	JUN 30.81	U 220.0	*****	6.45	0.0778	1.85	0.69	0.60
AUG 31.81	AUG 4.81	1700.0	52.5	3.97	0.1342	4.05	0.54	0.18
OCT 2.81	AUG 31.81	2690.0	17.9	6.15	0.1022	1.75	0.44	0.10
OCT 31.81	OCT 2.81	1817.0	23.4	6.30	0.0854	2.00	0.34	0.07
NOV 30.81	OCT 31.81	1210.0	24.0	6.24	0.1044	2.00	0.39	0.12
JAN 5.92	NOV 30.81	U 425.0	U 27.2	6.20	0.0974	1.40	0.62	0.12

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : KILLARNEY/CUMULATIVE/WET #23

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
JUL 4.80	MAY 28.80	0.21	*****	0.060	0.580	0.070	U 2.950	*****
JUL 30.80	JUL 4.80	0.09	*****	U 0.075	0.020	0.040	0.430	*****
SEP 2.80	JUL 30.80	0.15	*****	U 0.060	0.020	0.050	U 0.540	*****
SEP 30.80	SEP 2.80	0.03	0.49	0.020	0.020	0.010	0.380	0.002
OCT 31.80	SEP 30.80	0.19	0.52	0.065	0.100	0.110	0.360	0.008
NOV 28.80	OCT 31.80	0.19	0.72	0.045	0.080	0.070	0.550	0.007
JAN 5.81	NOV 28.80	0.04	0.45	0.010	0.010	0.060	0.236	0.002
FEB 2.81	JAN 5.81	U 0.86	*****	0.115	U 0.300	U 0.560	0.430	*****
FEB 27.81	FEB 2.81	0.10	0.35	0.005	0.010	0.040	0.170	0.004
MAR 31.81	FEB 27.81	0.26	U 1.19	0.095	0.070	0.100	0.850	0.011
MAY 11.81	MAR 31.81	0.18	0.97	0.140	0.070	0.090	0.600	U 0.055
MAY 29.81	MAY 11.81	0.14	1.02	0.060	0.030	0.120	0.990	0.010
JUN 30.81	MAY 29.81	0.23	1.65	0.095	0.110	U 0.090	0.690	0.075
AUG 4.81	JUN 30.81	U 0.74	*****	0.150	0.370	U 0.450	0.380	*****
AUG 31.81	AUG 4.81	0.06	0.80	0.030	0.030	0.020	0.740	0.001
OCT 2.81	AUG 31.81	0.05	0.52	0.005	0.030	0.030	0.400	0.019
OCT 31.81	OCT 2.81	0.03	0.25	0.015	0.010	0.020	0.232	0.004
NOV 30.81	OCT 31.81	0.02	0.22	0.015	0.010	0.020	0.210	0.008
JAN 5.82	NOV 30.81	0.10	0.40	0.015	0.010	0.030	0.306	0.005

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINUM MG/L
JUL 4.80	MAY 28.80	*****	0.001	L 0.033	0.057	0.004	*****	0.041
JUL 30.80	JUL 4.80	*****	< 0.001	L 0.006	0.058	0.006	*****	0.074
SEP 2.80	JUL 30.80	*****	< 0.001	L 0.004	0.030	0.012	*****	0.020
SEP 30.80	SEP 2.80	0.002	0.001	0.015	0.017	0.008	< 0.002	0.022
OCT 31.80	SEP 30.80	0.004	0.002	0.009	0.028	0.007	< 0.002	0.022
NOV 28.80	OCT 31.80	0.004	< 0.001	0.013	0.057	0.012	< 0.002	0.035
JAN 5.81	NOV 28.80	0.003	< 0.001	0.024	0.091	0.007	< 0.002	0.009
FEB 2.81	JAN 5.81	*****	*****	*****	*****	*****	*****	*****
FEB 27.81	FEB 2.81	0.001	0.001	0.025	0.077	0.002	< 0.002	< 0.021
MAR 31.81	FEB 27.81	0.009	0.001	0.029	U 0.197	0.013	< 0.002	U 0.174
MAY 11.81	MAR 31.81	0.021	0.005	0.018	U 1.363	0.009	< 0.002	0.636
MAY 29.81	MAY 11.81	*****	*****	*****	*****	*****	*****	*****
JUN 30.81	MAY 29.81	0.007	0.002	0.018	U 0.117	0.008	< 0.002	U 0.141
AUG 4.81	JUN 30.81	*****	*****	*****	*****	*****	*****	*****
AUG 31.81	AUG 4.81	0.003	0.001	0.006	0.034	0.006	< 0.002	0.020
OCT 2.81	AUG 31.81	0.002	< 0.001	0.005	0.019	0.006	< 0.002	0.004
OCT 31.81	OCT 2.81	0.001	< 0.001	0.006	0.015	0.006	< 0.002	< 0.008
NOV 30.81	OCT 31.81	0.001	< 0.001	0.013	0.032	0.009	< 0.002	0.010
JAN 5.82	NOV 30.81	*****	*****	*****	*****	*****	*****	*****

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : KILLARNEY/CUMULATIVE/WET #23

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM MG/L	FREE H+ MG/L
JUL 4.80	MAY 28.80	L 0.002	0.0004	U 0.0002
JUL 30.80	JUL 4.80	L 0.002	0.0002	0.0741
SEP 2.80	JUL 30.80	L 0.001	0.0001	0.1230
SEP 30.80	SEP 2.80	0.001	0.0002	0.0661
OCT 31.80	SEP 30.80	0.003	0.0002	0.0603
NOV 28.80	OCT 31.80	0.004	0.0003	0.0537
JAN 5.81	NOV 28.80	0.004	< 0.0001	0.0562
FEB 2.81	JAN 5.81	*****	******	0.1096
FEB 27.81	FEB 2.81	0.004	0.0001	0.0389
MAR 31.81	FEB 27.81	0.008	0.0004	0.0537
MAY 11.81	MAR 31.81	0.007	0.0003	0.0457
MAY 29.81	MAY 11.81	*****	******	0.0794
JUN 30.81	MAY 29.81	U 0.013	0.0002	0.0851
AUG 4.81	JUN 30.81	*****	******	0.0355
AUG 31.81	AUG 4.81	0.002	0.0001	0.1072
OCT 2.81	AUG 31.81	0.002	< 0.0001	0.0708
OCT 31.81	OCT 2.81	0.006	0.0002	0.0501
NOV 30.81	OCT 31.81	0.002	0.0004	0.0525
JAN 5.82	NOV 30.81	*****	******	0.0631

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MATTAWA/CUMULATIVE/WET #22

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 09-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
OCT 1.80	AUG 22.80	1200	1000	1	193.8	9	829	2	1	***	ADHG	N
OCT 31.80	SEP 30.80	1000	900	3	75.0	0	830	2	1	A	CDH	N
NOV 28.80	OCT 31.80	1330	1100	2	56.0	0	831	2	1	116	CD	
JAN 5.81	NOV 28.80	1015	1030	2	69.0	0	832	2	1	79		
JAN 30.81	JAN 5.81	1030	1130	2	21.0	0	833	2	1	24	CH	NHM
FEB 27.81	JAN 30.81	1130	1000	2	43.0	0	834	2	1	35	ACHIF	NM
MAR 31.81	FEB 27.81	1000	1115	1	57.0	0	1939	2	1	93	ACD	
APR 30.81	MAR 31.81	1115	1100	1	95.0	0	1911	2	1	82	CD	
MAY 29.81	APR 30.81	1100	1145	1	74.0	0	11049	2	1	61	CFID	
JUN 30.81	MAY 29.81	1145	950	1	188.0	0	11052	2	1	79	CD	
JUL 31.81	JUN 30.81	950	1030	1	113.0	0	11054	2	1	***	CDGH	N
AUG 31.81	JUL 31.81	1030	1120	1	93.0	0	11055	2	1	93	D	
OCT 2.81	AUG 31.81	1120	1545	1	134.0	0	11057	2	1	AA	AD	
OCT 31.81	OCT 2.81	1545	1030	1	60.0	0	11059	2	1	***	AGHQ	
DEC 1.81	OCT 31.81	1030	1100	4	39.9	9	11061	2	1	***	CGHF	
JAN 5.82	DEC 1.81	1100	1330	*	35.0	0	11063	2	1	***	GF	

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
OCT 1.80	AUG 22.80	U 2125.0	*****	4.37	0.0836	*****	*****	*****
OCT 31.80	SEP 30.80	U 215.0	19.0	4.89	******	2.55	0.47	*****
NOV 28.80	OCT 31.80	2125.0	34.6	4.18	0.1134	2.75	0.72	0.19
JAN 5.81	NOV 28.80	1770.0	17.5	4.45	0.0798	1.10	0.36	0.06
JAN 30.81	JAN 5.81	U 170.0	*****	4.65	******	2.60	0.67	0.19
FEB 27.81	JAN 30.81	U 500.0	29.6	4.26	0.0866	1.90	0.61	0.07
MAR 31.81	FEB 27.81	1735.0	22.2	4.51	0.0666	2.80	0.48	0.38
APR 30.81	MAR 31.81	2535.0	21.6	4.61	0.0594	3.55	0.50	0.74
MAY 29.81	APR 30.81	1485.0	25.2	4.26	0.0856	2.40	0.29	0.15
JUN 30.81	MAY 29.81	4830.0	30.1	4.20	0.0912	3.20	0.34	0.20
JUL 31.81	JUN 30.81	U 980.0	43.5	4.15	0.1168	5.20	0.36	0.22
AUG 31.81	JUL 31.81	2830.0	41.7	4.04	0.1212	4.10	0.34	0.07
OCT 2.81	AUG 31.81	3855.0	25.9	4.30	0.0806	2.05	0.28	0.06
OCT 31.81	OCT 2.81	1653.0	19.3	4.39	0.0684	1.65	0.26	0.18
DEC 1.81	OCT 31.81	******	*****	*****	******	*****	*****	*****
JAN 5.82	DEC 1.81	******	*****	*****	******	*****	*****	*****

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MATTAWA/CUMULATIVE/WET #22

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
OCT 1-80	AUG 22,80	*****	0,84	*****	*****	*****	*****	0.028
OCT 31-80	SEP 30,80	*****	*****	*****	*****	*****	0.660	*****
NOV 28-80	OCT 31,80	0.15	0.62	0.035	0.070	0.050	0.480	0.013
JAN 5-81	NOV 28,80	0.10	0.26	0.015	0.020	0.060	0.116	0.001
JAN 30-81	JAN 5,81	0.23	*****	0.070	0.080	0.500	0.236	*****
FEB 27-81	JAN 30,81	0.16	0.42	0.010	0.040	0.100	0.198	0.008
MAR 31-81	FEB 27,81	0.19	0.66	0.065	0.070	0.100	0.500	0.004
APR 30-81	MAR 31,81	0.18	0.75	0.110	0.080	0.120	0.560	0.020
MAY 29-81	APR 30,81	0.10	0.27	0.035	0.030	0.070	0.160	0.010
JUN 30-81	MAY 29,81	0.12	0.42	0.040	0.050	0.040	0.314	0.020
JUL 31-81	JUN 30,81	0.35	0.78	0.030	0.230	U 0.230	0.480	0.022
AUG 31-81	JUL 31,81	0.12	0.26	0.010	0.030	0.030	0.250	0.001
OCT 2-81	AUG 31,81	0.04	0.29	0.005	0.020	0.030	0.232	0.014
OCT 31-81	OCT 2,81	0.07	0.14	U 0.010	0.050	0.020	0.122	0.002
DEC 1-81	OCT 31,81	*****	*****	*****	*****	*****	*****	*****
JAN 5-82	DEC 1,81	*****	*****	*****	*****	*****	*****	*****

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINUM MG/L
OCT 1-80	AUG 22,80	0.004	0.004	0.031	0.032	0.009	< 0.002	0.031
OCT 31-80	SEP 30,80	*****	*****	*****	*****	*****	*****	*****
NOV 28-80	OCT 31,80	0.004	0.002	0.021	0.101	0.018	< 0.002	0.046
JAN 5-81	NOV 28,80	0.001	< 0.001	0.010	0.019	0.007	< 0.002	0.008
JAN 30-81	JAN 5,81	*****	*****	*****	*****	*****	*****	*****
FEB 27-81	JAN 30,81	0.003	0.004	0.013	0.082	0.007	< 0.002	U 0.087
MAR 31-81	FEB 27,81	0.008	0.007	L 0.078	L 0.059	0.010	< 0.002	L 0.052
APR 30-81	MAR 31,81	0.014	0.002	0.009	0.263	0.003	< 0.002	0.255
MAY 29-81	APR 30,81	0.003	0.002	0.015	0.056	0.004	< 0.002	0.039
JUN 30-81	MAY 29,81	0.001	< 0.001	0.005	0.099	0.002	< 0.002	0.108
JUL 31-81	JUN 30,81	0.005	0.002	U 0.022	U 0.201	0.014	< 0.002	0.119
AUG 31-81	JUL 31,81	0.010	< 0.001	U 0.067	U 0.168	0.007	< 0.002	U 0.120
OCT 2-81	AUG 31,81	0.002	< 0.001	0.002	0.061	0.003	< 0.002	0.012
OCT 31-81	OCT 2,81	0.002	< 0.001	0.006	0.016	0.008	< 0.002	< 0.008
DEC 1-81	OCT 31,81	*****	*****	*****	*****	*****	*****	*****
JAN 5-82	DEC 1,81	*****	*****	*****	*****	*****	*****	*****

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MATTAWA/CUMULATIVE/WET #22

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM MG/L	FREE H+ MG/L
OCT 1.80	AUG 22.80	0.013	0.0004	0.0427
OCT 31.80	SEP 30.80	*****	******	0.0129
NOV 28.80	OCT 31.80	0.004	0.0004	0.0661
JAN 5.81	NOV 28.80	0.003	0.0002	0.0355
JAN 30.81	JAN 5.81	*****	******	0.0224
FEB 27.81	JAN 30.81	0.008	0.0002	0.0550
MAR 31.81	FEB 27.81	L 0.002	0.0003	0.0309
APR 30.81	MAR 31.81	0.002	0.0003	0.0245
MAY 29.81	APR 30.81	0.003	< 0.0001	0.0550
JUN 30.81	MAY 29.81	0.002	0.0001	0.0631
JUL 31.81	JUN 30.81	U 0.020	0.0008	0.0708
AUG 31.81	JUL 31.81	0.003	< 0.0001	0.0912
OCT 2.81	AUG 31.81	0.001	< 0.0001	0.0501
OCT 31.81	OCT 2.81	0.005	0.0003	0.0407
DEC 1.81	OCT 31.81	*****	******	******
JAN 5.82	DEC 1.81	*****	******	******

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MCKELLAR/CUMULATIVE/WET #21

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 09-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
SEP 30.80	AUG 25.80	900	850	1	203.0	9	817	2	1	47	ACDFI	N
OCT 31.80	SEP 30.80	900	710	1	143.6	9	818	2	1	5	ADH	N
NOV 28.80	OCT 31.80	715	748	3	60.5	9	819	2	1	47	ADH	N
DEC 31.80	NOV 28.80	750	735	2	121.8	9	820	2	1	***		X
JAN 30.81	DEC 31.80	810	835	2	30.3	9	821	2	1	14	H	N
FEB 27.81	JAN 30.81	840	830	2	77.0	0	822	2	1	40	FI	N
MAR 30.81	FEB 27.81	840	830	1	40.0	0	1941	2	1	38	ARMI	N
APR 30.81	MAR 30.81	840	800	1	116.2	9	1918	2	1	51	ACD	
MAY 29.81	APR 30.81	800	930	1	35.0	0	11001	2	1	***	ADG	
JUN 30.81	MAY 29.81	930	900	1	135.0	0	11004	2	1	19	CDFI	N
JUL 31.81	JUN 30.81	900	910	1	35.0	0	11006	2	1	***	CDGH	N
AUG 31.81	JUL 31.81	910	1830	1	190.0	0	11007	2	1	***	ACGHE	
SEP 29.81	AUG 31.81	1830	800	1	125.0	0	11177	2	1	***	CDGH	
OCT 30.81	SEP 29.81	800	900	1	96.0	0	11011	2	1	9	CD	
NOV 30.81	OCT 30.81	900	830	4	78.0	0	11013	2	1	***	CDGHE	
JAN 5.82	NOV 30.81	830	800	4	114.0	0	11015	2	1	66	CD	

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
SEP 30.80	AUG 25.80	U 3121.0	52.0	3.93	0.1422	5.40	0.57	0.51
OCT 31.80	SEP 30.80	U 255.0	19.5	U 6.32	0.0480	2.80	0.46	*****
NOV 28.80	OCT 31.80	U 940.0	31.7	4.25	0.1042	2.65	0.84	0.45
DEC 31.80	NOV 28.80	******	*****	*****	******	*****	*****	*****
JAN 30.81	DEC 31.80	U 145.0	*****	U 4.85	******	1.25	0.29	0.14
FEB 27.81	JAN 30.81	U 1020.0	51.0	4.01	0.1282	3.60	0.84	0.19
MAR 30.81	FEB 27.81	U 500.0	22.6	4.49	0.0676	2.40	0.50	0.30
APR 30.81	MAR 30.81	1935.0	26.0	4.69	0.0590	4.65	0.63	0.95
MAY 29.81	APR 30.81	1300.0	25.5	4.40	0.0716	3.20	0.30	0.30
JUN 30.81	MAY 29.81	U 855.0	38.0	4.15	0.1086	4.50	0.52	0.26
JUL 31.81	JUN 30.81	U 450.0	U 70.0	3.96	0.1158	U 8.50	U 0.89	0.33
AUG 31.81	JUL 31.81	******	*****	*****	******	*****	*****	*****
SEP 29.81	AUG 31.81	3600.0	29.6	4.17	0.0986	2.90	0.40	0.20
OCT 30.81	SEP 29.81	2463.0	29.0	4.25	0.0892	2.20	0.42	0.09
NOV 30.81	OCT 30.81	******	*****	*****	******	*****	*****	*****
JAN 5.82	NOV 30.81	2469.0	21.5	4.35	0.0772	1.65	0.54	0.12

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MCKELLAR/CUMULATIVE/WET #21

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
SEP 30.80	AUG 25.80	0.08	0.54	0.055	U 0.040	U 0.040	0.440	0.008
OCT 31.80	SEP 30.80	U 0.82	*****	*****	*****	*****	U 1.660	*****
NOV 28.80	OCT 31.80	0.23	0.98	0.080	0.070	0.100	0.610	0.008
DEC 31.80	NOV 28.80	*****	*****	*****	*****	*****	*****	*****
JAN 30.81	DEC 31.80	0.50	*****	0.030	0.090	0.320	0.370	*****
FEB 27.81	JAN 30.81	U 0.43	0.50	U 0.035	0.020	U 0.330	0.348	0.009
MAR 30.81	FEB 27.81	0.27	0.58	0.045	0.030	0.150	0.430	0.003
APR 30.81	MAR 30.81	0.35	0.95	0.175	0.110	0.220	0.780	0.038
MAY 29.81	APR 30.81	0.52	1.00	0.045	0.050	U 0.410	0.450	0.055
JUN 30.81	MAY 29.81	0.14	0.78	0.070	0.040	0.040	0.710	0.018
JUL 31.81	JUN 30.81	0.11	U 1.50	0.065	0.050	0.070	U 1.260	0.020
AUG 31.81	JUL 31.81	*****	*****	*****	*****	*****	*****	*****
SEP 29.81	AUG 31.81	0.01	0.45	0.045	0.230	0.010	*****	0.010
OCT 30.81	SEP 29.81	0.05	0.26	< 0.005	0.020	0.020	0.246	0.004
NOV 30.81	OCT 30.81	*****	*****	*****	*****	*****	*****	*****
JAN 5.82	NOV 30.81	0.22	0.41	0.015	U 0.060	U 0.140	0.338	0.002

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINUM MG/L
SEP 30.80	AUG 25.80	0.003	< 0.001	< 0.003	0.053	0.010	< 0.002	0.044
OCT 31.80	SEP 30.80	*****	*****	*****	*****	*****	*****	*****
NOV 28.80	OCT 31.80	0.008	0.001	< 0.025	0.198	0.021	< 0.002	0.096
DEC 31.80	NOV 28.80	*****	*****	*****	*****	*****	*****	*****
JAN 30.81	DEC 31.80	*****	*****	*****	*****	*****	*****	*****
FEB 27.81	JAN 30.81	< 0.001	< 0.001	< 0.004	0.004	< 0.001	< 0.002	< 0.010
MAR 30.81	FEB 27.81	0.007	0.003	0.038	0.205	0.009	< 0.002	0.053
APR 30.81	MAR 30.81	0.017	0.001	0.014	0.237	0.003	< 0.002	0.209
MAY 29.81	APR 30.81	0.004	0.002	0.012	0.039	0.005	0.002	0.031
JUN 30.81	MAY 29.81	0.003	< 0.001	0.011	0.059	0.006	< 0.002	0.077
JUL 31.81	JUN 30.81	*****	*****	*****	*****	*****	*****	*****
AUG 31.81	JUL 31.81	*****	*****	*****	*****	*****	*****	*****
SEP 29.81	AUG 31.81	0.003	< 0.001	0.006	0.031	0.007	< 0.002	0.013
OCT 30.81	SEP 29.81	0.001	< 0.001	0.007	0.013	0.003	< 0.002	0.009
NOV 30.81	OCT 30.81	*****	*****	*****	*****	*****	*****	*****
JAN 5.82	NOV 30.81	0.001	0.001	0.012	0.033	0.009	0.002	0.010

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MCKELLAR/CUMULATIVE/WET #21

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM MG/L	FREE H+ MG/L
SEP 30.80	AUG 25.80	0.001	0.0001	0.1175
OCT 31.80	SEP 30.80	*****	******	U 0.0005
NOV 28.80	OCT 31.80	0.004	0.0004	0.0562
DEC 31.80	NOV 28.80	*****	******	******
JAN 30.81	DEC 31.80	*****	******	U 0.0141
FEB 27.81	JAN 30.81	0.003	< 0.0001	0.0977
MAR 30.81	FEB 27.81	0.006	0.0007	0.0324
APR 30.81	MAR 30.81	0.004	0.0003	0.0204
MAY 29.81	APR 30.81	0.005	0.0004	0.0398
JUN 30.81	MAY 29.81	0.008	0.0001	0.0708
JUL 31.81	JUN 30.81	*****	******	0.1096
AUG 31.81	JUL 31.81	*****	******	******
SEP 29.81	AUG 31.81	0.004	< 0.0001	0.0676
OCT 30.81	SEP 29.81	0.006	0.0004	0.0562
NOV 30.81	OCT 30.81	*****	******	******
JAN 5.82	NOV 30.81	0.003	0.0001	0.0447

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MOONBEAM/CUMULATIVE/WET #27

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 09-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
										***	ADGHFJ	NHCM
SEP 30.80	SEP 2.80	910	900	1	82.0	0	852	2	1	93	AD	
OCT 31.80	SEP 30.80	900	1000	4	38.0	0	853	2	1	43	FJ	N
DEC 2.80	OCT 31.80	1015	905	4	32.0	0	854	2	1	33	FHI	N
DEC 31.80	DEC 2.80	905	845	2	25.0	0	855	2	1	12	CH	N
JAN 30.81	DEC 31.80	900	1530	4	20.0	0	856	2	1	76	H	
MAR 3.81	JAN 30.81	1545	920	4	35.0	0	857	2	1	13	A	N
MAR 31.81	MAR 3.81	925	1300	4	31.0	9	1937	2	1	***	CDH	
APR 29.81	MAR 31.81	1315	1530	1	34.0	0	2163	2	1	88	C	
MAY 29.81	APR 29.81	1530	930	1	85.0	0	11145	2	1	41	ACDF	NH
JUL 7.81	MAY 29.81	930	1400	1	91.0	0	11148	2	1	60	CDFI	HC
AUG 1.81	JUL 7.81	1400	1000	1	22.0	0	11150	2	1	88	ACD	
AUG 31.81	AUG 1.81	1000	1300	1	68.0	0	11151	2	1	76	ACD	
SEP 30.81	AUG 31.81	1300	830	1	89.0	0	11153	2	1	26	ACI	NH
OCT 30.81	SEP 30.81	830	830	1	63.0	0	11155	2	1	***	CDGH	N
NOV 30.81	OCT 30.81	830	900	4	43.0	0	11158	2	1	27	CDF	N
JAN 5.82	NOV 30.81	900	930	2	47.0	0	11159					

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
SEP 30.80	SEP 2.80	U 1233.0	48.2	U 7.39	0.0342	3.45	0.17	U 6.30
OCT 31.80	SEP 30.80	1150.0	23.2	U 5.10	0.0722	2.55	0.71	0.46
DEC 2.80	OCT 31.80	U 450.0	10.9	4.90	0.0488	1.00	0.40	0.35
DEC 31.80	DEC 2.80	U 270.0	*****	4.34	0.0842	1.35	0.41	0.14
JAN 30.81	DEC 31.80	U 80.0	*****	4.45	******	2.30	0.70	*****
MAR 3.81	JAN 30.81	870.0	24.2	4.42	0.0688	2.30	0.46	0.16
MAR 31.81	MAR 3.81	U 140.0	*****	U 6.49	******	2.60	0.38	*****
APR 29.81	MAR 31.81	******	*****	*****	******	*****	*****	*****
MAY 29.81	APR 29.81	2430.0	20.5	4.33	0.0788	2.30	0.18	0.07
JUL 7.81	MAY 29.81	U 1220.0	13.3	4.72	0.0514	1.80	0.24	0.22
AUG 1.81	JUL 7.81	430.0	U 8.1	U 6.30	0.0342	1.25	0.12	0.78
AUG 31.81	AUG 1.81	1950.0	U 9.8	U 5.24	0.0342	1.50	0.16	0.19
SEP 30.81	AUG 31.81	2215.0	15.4	4.56	0.0560	1.55	0.12	0.05
OCT 30.81	SEP 30.81	U 535.0	U 9.5	U 6.24	0.0356	1.60	0.11	0.04
NOV 30.81	OCT 30.81	U 225.0	13.4	U 5.39	******	1.80	0.40	U 0.62
JAN 5.82	NOV 30.81	U 414.0	23.8	4.28	0.1034	1.75	0.61	0.33

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MOOSNEAM/CUMULATIVE/WET #27 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
SEP 30.80	SEP 2.80	U 0.97	U 0.99	U 0.115	U 0.570	U 1.280	U 0.730	U 0.068
OCT 31.80	SEP 30.80	0.13	U 1.34	0.085	0.170	0.070	U 1.060	U 0.066
DEC 2.80	OCT 31.80	0.10	0.57	0.055	0.030	0.040	0.370	0.005
DEC 31.80	DEC 2.80	0.05	0.35	0.030	< 0.010	0.050	0.184	0.002
JAN 30.81	DEC 31.80	0.27	*****	*****	*****	*****	0.380	*****
MAR 3.81	JAN 30.81	0.13	0.60	0.010	0.010	0.050	0.470	0.004
MAR 31.81	MAR 3.81	0.15	*****	0.025	*****	*****	U 1.010	*****
APR 29.81	MAR 31.81	*****	*****	*****	*****	*****	*****	*****
MAY 29.81	APR 29.81	0.04	0.27	0.025	0.030	0.020	0.250	0.012
JUL 7.81	MAY 29.81	0.04	0.65	0.145	0.090	0.030	0.400	0.035
AUG 1.81	JUL 7.81	0.08	0.22	0.205	0.030	0.020	0.068	0.018
AUG 31.81	AUG 1.81	0.04	0.72	0.035	0.100	< 0.010	0.410	0.047
SEP 30.81	AUG 31.81	< 0.01	0.24	0.005	0.020	0.010	0.176	0.017
OCT 30.81	SEP 30.81	0.10	U 1.48	0.005	0.350	0.080	0.720	0.160
NOV 30.81	OCT 30.81	0.22	*****	U 0.195	0.070	0.150	0.312	*****
JAN 5.82	NOV 30.81	0.20	0.38	U 0.090	0.020	0.090	0.210	0.005

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINUM MG/L
SEP 30.80	SEP 2.80	0.002	0.002	0.011	0.025	0.003	< 0.002	0.077
OCT 31.80	SEP 30.80	0.006	0.002	0.014	0.081	0.005	< 0.002	0.050
DEC 2.80	OCT 31.80	*****	*****	*****	*****	*****	*****	*****
DEC 31.80	DEC 2.80	*****	*****	*****	*****	*****	*****	*****
JAN 30.81	DEC 31.80	*****	*****	*****	*****	*****	*****	*****
MAR 3.81	JAN 30.81	0.002	< 0.001	0.007	0.016	0.005	< 0.002	0.012
MAR 31.81	MAR 3.81	*****	*****	*****	*****	*****	*****	*****
APR 29.81	MAR 31.81	*****	*****	*****	*****	*****	*****	*****
MAY 29.81	APR 29.81	0.003	0.001	0.031	0.029	0.004	< 0.002	0.029
JUL 7.81	MAY 29.81	0.003	< 0.001	0.006	0.025	0.001	< 0.002	0.020
AUG 1.81	JUL 7.81	*****	*****	*****	*****	*****	*****	*****
AUG 31.81	AUG 1.81	0.005	< 0.001	0.007	0.033	0.007	< 0.002	0.031
SEP 30.81	AUG 31.81	0.001	< 0.001	0.002	0.011	0.002	< 0.002	< 0.007
OCT 30.81	SEP 30.81	< 0.001	< 0.001	0.011	0.021	0.001	< 0.002	0.011
NOV 30.81	OCT 30.81	*****	*****	*****	*****	*****	*****	*****
JAN 5.82	NOV 30.81	*****	*****	*****	*****	*****	*****	*****

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MOONBEAM/CUMULATIVE/WET #27

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM MG/L	FREE H+ MG/L
SEP 30.80	SEP 2.80	0.003	< 0.0001	U 0.0000
OCT 31.80	SEP 30.80	0.004	< 0.0001	U 0.0079
DEC 2.80	OCT 31.80	*****	******	0.0126
DEC 31.80	DEC 2.80	*****	******	0.0457
JAN 30.81	DEC 31.80	*****	******	0.0355
MAR 3.81	JAN 30.81	0.007	0.0001	0.0380
MAR 31.81	MAR 3.81	*****	******	U 0.0003
APR 29.81	MAR 31.81	*****	******	******
MAY 29.81	APR 29.81	0.001	< 0.0001	0.0468
JUL 7.81	MAY 29.81	0.007	< 0.0001	0.0191
AUG 1.81	JUL 7.81	*****	******	U 0.0005
AUG 31.81	AUG 1.81	0.004	0.0001	U 0.0058
SEP 30.81	AUG 31.81	< 0.001	< 0.0001	0.0275
OCT 30.81	SEP 30.81	< 0.003	0.0014	U 0.0006
NOV 30.81	OCT 30.81	*****	******	U 0.0041
JAN 5.82	NOV 30.81	*****	******	0.0525

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAMSEY/CUMULATIVE/WET #26

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 09-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
JUL 3.80	MAY 29.80	****	****	1	*****	*	2185	2	1	***		
JUL 31.80	JUL 3.80	****	****	1	87.6	9	2186	2	1	64		
AUG 29.80	JUL 31.80	****	****	1	54.2	9	2187	2	1	89		
SEP 30.80	SEP 2.80	900	905	1	116.0	0	840	2	1	74	CDH	
OCT 31.80	SEP 30.80	905	815	3	52.0	0	841	2	1	78	CD	
NOV 28.80	OCT 31.80	815	900	2	22.0	0	842	2	1	82	DH	
DEC 30.80	NOV 28.80	905	900	2	48.0	0	843	2	1	28	FHI	N
JAN 30.81	DEC 30.80	905	900	4	14.0	0	844	2	1	10	DH	N
FEB 27.81	JAN 30.81	910	900	4	31.0	0	845	2	1	86		
MAR 31.81	FEB 27.81	900	900	1	65.0	0	1939	2	1	79	D	
APR 30.81	MAR 31.81	905	900	1	111.0	0	1913	2	1	79	CD	
MAY 29.81	APR 30.81	900	900	1	56.0	0	11097	2	1	44	ACD	N
JUN 30.81	MAY 29.81	900	900	1	104.0	0	11100	2	1	100	CD	C
JUL 31.81	JUN 30.81	900	900	1	18.0	0	11101	2	1	71	D	
AUG 31.81	JUL 31.81	900	900	1	62.0	0	11103	2	1	***	CDG	
SEP 30.81	AUG 31.81	900	1300	1	78.0	0	11105	2	1	***	RCDG	
OCT 30.81	SEP 30.81	1300	900	1	123.0	0	11108	2	1	93	CD	
NOV 30.81	OCT 30.81	900	900	4	42.0	0	11109	2	1	80	CD	
JAN 6.82	NOV 30.81	900	1230	4	48.0	0	11111	2	1	71	CD	

REMOVAL DATE	EXPOSURE DATE		VOLUME ML	CONDUCT. UMHO/CM		PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
JUL 3.80	MAY 29.80		1525.0	30.4		4.18	0.0904	3.35	0.38	0.31
JUL 31.80	JUL 3.80		1840.0	15.4		4.45	0.0358	1.60	0.20	0.10
AUG 29.80	JUL 31.80		1720.0	18.8		4.43	0.0632	1.75	0.18	0.06
SEP 30.80	SEP 2.80		2818.0	17.5		4.50	0.0574	2.25	0.19	0.25
OCT 31.80	SEP 30.80		1325.0	20.1		4.41	0.0736	2.10	0.30	0.17
NOV 28.80	OCT 31.80		590.0	16.3		4.57	0.0648	1.30	0.35	0.11
DEC 30.80	NOV 28.80	U	450.0	14.9		4.51	0.0758	0.90	0.29	0.04
JAN 30.81	DEC 30.80	U	50.0	*****	U	5.08	******	*****	*****	*****
FEB 27.81	JAN 30.81		875.0	31.9		4.19	0.0954	2.00	0.64	0.08
MAR 31.81	FEB 27.81		1670.0	22.5		4.41	0.0737	2.95	0.36	0.21
APR 30.81	MAR 31.81		2865.0	11.0		5.12	0.0744	2.05	0.29	0.55
MAY 29.81	APR 30.81	U	815.0	38.3		4.15	0.1080	4.20	0.56	0.38
JUN 30.81	MAY 29.81		3390.0	26.6		4.12	0.1068	2.70	0.28	0.16
JUL 31.81	JUN 30.81		420.0	31.8		4.25	0.1028	3.00	0.39	0.14
AUG 31.81	JUL 31.81		1720.0	25.4		4.40	0.0708	3.40	0.24	0.16
SEP 30.81	AUG 31.81		1810.0	15.8		4.50	0.0607	1.70	0.15	0.19
OCT 30.81	SEP 30.81		3716.0	12.4		4.62	0.0504	0.95	0.10	0.06
NOV 30.81	OCT 30.81		1096.0	23.1		4.33	0.0947	1.95	0.42	0.12
JAN 6.82	NOV 30.81		1121.0	23.2		4.25	0.0867	1.45	0.55	0.08

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAMSEY/CUMULATIVE/WET #26 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
JUL 3-80	MAY 29,80	0.11	*****	0.055	0.060	0.050	0.290	*****
JUL 31-80	JUL 3,80	0.08	*****	< 0.025	0.050	0.060	0.206	*****
AUG 29-80	JUL 31,80	0.01	*****	0.015	0.020	0.020	0.134	*****
SEP 30-80	SEP 2,80	U 0.46	0.44	0.030	U 0.350	U 0.350	0.268	0.002
OCT 31-80	SEP 30,80	0.05	0.39	0.020	0.030	0.050	0.264	0.006
NOV 28-80	OCT 31,80	0.53	0.44	0.025	U 0.270	U 0.320	0.262	0.004
DEC 30-80	NOV 28,80	0.14	0.30	0.010	0.020	0.040	0.176	0.002
JAN 30-81	DEC 30,80	*****	*****	*****	*****	*****	*****	*****
FEB 27-81	JAN 30,81	0.16	0.42	0.005	0.030	0.090	0.222	0.003
MAR 31-81	FEB 27,81	0.11	0.70	0.030	0.040	0.050	0.520	0.003
APR 30-81	MAR 31,81	0.10	0.50	0.070	0.100	0.050	0.374	0.018
MAY 29-81	APR 30,81	0.14	0.75	0.080	U 0.470	0.090	0.550	0.032
JUN 30-81	MAY 29,81	0.05	0.30	0.030	0.030	0.040	0.236	0.015
JUL 31-81	JUN 30,81	0.15	0.60	0.030	0.040	0.030	0.330	0.010
AUG 31-81	JUL 31,81	0.09	0.81	0.035	0.100	0.020	0.530	0.052
SEP 30-81	AUG 31,81	0.02	0.24	U 0.030	0.040	0.050	0.160	0.025
OCT 30-81	SEP 30,81	0.03	0.08	< 0.005	0.040	0.020	0.066	0.001
NOV 30-81	OCT 30,81	0.04	0.30	0.025	0.020	0.040	0.212	0.020
JAN 6-82	NOV 30,81	0.09	0.28	0.010	0.030	0.050	0.190	0.002

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINIUM MG/L
JUL 3-80	MAY 29,80	*****	0.002	L 0.014	0.079	0.004	*****	0.046
JUL 31-80	JUL 3,80	*****	0.001	L 0.005	0.041	0.012	*****	0.062
AUG 29-80	JUL 31,80	*****	0.001	L 0.004	0.024	0.004	*****	0.030
SEP 30-80	SEP 2,80	< 0.001	0.003	0.007	0.014	0.005	< 0.002	0.017
OCT 31-80	SEP 30,80	0.003	< 0.001	0.007	0.029	0.004	< 0.002	0.023
NOV 28-80	OCT 31,80	0.002	0.002	0.056	0.122	0.005	< 0.002	0.033
DEC 30-80	NOV 28,80	*****	*****	*****	*****	*****	*****	*****
JAN 30-81	DEC 30,80	*****	*****	*****	*****	*****	*****	*****
FEB 27-81	JAN 30,81	0.002	0.002	0.025	0.068	0.005	< 0.002	0.008
MAR 31-81	FEB 27,81	0.003	< 0.001	0.017	0.078	0.005	< 0.002	0.073
APR 30-81	MAR 31,81	0.014	0.001	U 0.044	0.230	0.001	0.004	0.276
MAY 29-81	APR 30,81	0.007	0.002	0.015	0.079	0.007	< 0.002	0.045
JUN 30-81	MAY 29,81	0.003	< 0.001	0.006	0.020	0.001	< 0.002	0.026
JUL 31-81	JUN 30,81	*****	*****	*****	*****	*****	*****	*****
AUG 31-81	JUL 31,81	0.003	< 0.001	0.007	0.025	0.011	< 0.002	0.021
SEP 30-81	AUG 31,81	0.004	< 0.001	0.004	0.030	0.002	< 0.002	U 0.025
OCT 30-81	SEP 30,81	< 0.001	< 0.001	0.004	0.012	0.002	< 0.002	0.005
NOV 30-81	OCT 30,81	0.003	< 0.001	0.075	U 0.133	0.008	< 0.002	U 0.191
JAN 6-82	NOV 30,81	0.001	< 0.001	0.014	0.051	0.004	< 0.002	0.009

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAMSEY/CUMULATIVE/WET #26

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM MG/L	FREE H+ MG/L
JUL 3.80	MAY 29.80	L 0.005	0.0002	0.0661
JUL 31.80	JUL 3.80	L 0.002	< 0.0001	0.0355
AUG 29.80	JUL 31.80	L 0.002	0.0003	0.0372
SEP 30.80	SEP 2.80	0.003	0.0016	0.0316
OCT 31.80	SEP 30.80	< 0.002	< 0.0001	0.0389
NOV 28.80	OCT 31.80	< 0.005	0.0008	0.0269
DEC 30.80	NOV 28.80	*****	******	0.0309
JAN 30.81	DEC 30.80	*****	******	U 0.0008
FEB 27.81	JAN 30.81	0.007	0.0002	0.0646
MAR 31.81	FEB 27.81	0.004	< 0.0001	0.0389
APR 30.81	MAR 31.81	0.006	< 0.0001	0.0076
MAY 29.81	APR 30.81	0.003	0.0002	0.0708
JUN 30.81	MAY 29.81	0.002	< 0.0001	0.0759
JUL 31.81	JUN 30.81	*****	******	0.0562
AUG 31.81	JUL 31.81	0.002	0.0002	0.0398
SEP 30.81	AUG 31.81	0.002	< 0.0001	0.0316
OCT 30.81	SEP 30.81	0.003	< 0.0001	0.0240
NOV 30.81	OCT 30.81	0.003	0.0003	0.0468
JAN 6.82	NOV 30.81	0.002	< 0.0001	0.0562

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : WHITNEY/CUMULATIVE/WET #19

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 04-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
SEP 30.80	SEP 2.80	1024	1000	1	77.5	0	863	2	1	76		
OCT 31.80	SEP 30.80	1000	1100	1	107.5	0	864	2	1	95	HFI	C
NOV 28.80	OCT 31.80	1100	815	4	52.0	0	865	2	1	64		
DEC 31.80	NOV 28.80	815	845	*	83.0	0	866	2	1	***	GE	
JAN 30.81	DEC 31.80	915	900	2	23.0	0	867	2	1	***	G	N
FEB 27.81	JAN 30.81	900	1400	4	94.0	0	868	2	1	79		
MAR 31.81	FEB 27.81	1400	900	3	54.0	0	1935	2	1	***	CDG	N
APR 30.81	MAR 31.81	900	1030	1	63.0	0	1945	2	1	84	CDJ	
MAY 29.81	APR 30.81	1030	1020	1	93.0	0	29003	2	1	51	C	
JUN 30.81	MAY 29.81	1020	1010	1	83.0	0	29011	2	1	60	CDJ	H
AUG 1.81	JUN 30.81	1010	1220	1	62.0	0	29015	2	1	65	CJ	
AUG 31.81	AUG 1.81	1220	1020	1	150.0	0	29019	2	1	65	LJ	
SEP 30.81	AUG 31.81	1030	1000	1	190.0	0	29029	2	1	***	GH	N
OCT 30.81	SEP 30.81	1000	900	3	82.0	0	29035	2	1	70		
NOV 30.81	OCT 30.81	915	900	3	63.0	0	29041	2	1	***	G	
JAN 5.82	NOV 30.81	900	930	2	58.0	0	29053	2	1	***	G	

REMOVAL DATE	EXPOSURE DATE		VOLUME ML	CONDUCT. UMHO/CM		PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
SEP 30.80	SEP 2.80		1915.0	30.2		4.22	0.0898	3.65	0.41	0.15
OCT 31.80	SEP 30.80		3350.0	16.5		4.42	0.0724	1.75	0.31	0.13
NOV 28.80	OCT 31.80		1095.0	12.7		4.64	0.0488	0.90	0.27	0.06
DEC 31.80	NOV 28.80		******	*****		*****	******	*****	*****	*****
JAN 30.81	DEC 31.80	U	340.0	38.6		4.09	0.1210	1.85	0.90	0.06
FEB 27.81	JAN 30.81		2425.0	21.1		4.34	0.0742	1.35	0.37	0.04
MAR 31.81	FEB 27.81	U	450.0	27.2		4.32	0.0830	2.90	0.43	0.25
APR 30.81	MAR 31.81		1720.0	26.6		4.57	0.0688	4.15	0.61	0.82
MAY 29.81	APR 30.81		1540.0	34.5		4.13	0.1034	3.85	0.47	0.13
JUN 30.81	MAY 29.81		1640.0	19.5	U	5.85	0.0590	1.95	0.38	0.24
AUG 1.81	JUN 30.81		1315.0	27.7		4.24	0.0882	2.50	0.27	0.13
AUG 31.81	AUG 1.81		3140.0	44.8		3.98	0.1342	4.50	0.35	0.06
SEP 30.81	AUG 31.81	U	2550.0	30.5		4.27	0.0864	2.85	0.35	0.08
OCT 30.81	SEP 30.81		1876.0	22.7		4.34	0.0818	1.80	0.24	0.09
NOV 30.81	OCT 30.81		1175.0	10.6		4.65	0.0592	1.00	0.14	0.07
JAN 5.82	NOV 30.81		1067.0	12.5		4.55	0.0582	0.65	0.35	0.02

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : WHITNEY/CUMULATIVE/WET #14

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
SEP 30.80	SEP 2.80	0.05	0.88	0.015	0.020	0.010	0.690	0.004
OCT 31.80	SEP 30.80	0.02	0.28	0.020	0.020	< 0.010	0.278	0.001
NOV 28.80	OCT 31.80	0.05	0.31	0.010	0.010	< 0.010	0.230	0.005
DEC 31.80	NOV 28.80	*****	*****	*****	*****	*****	*****	*****
JAN 30.81	DEC 31.80	0.15	0.30	0.005	< 0.010	0.060	0.158	0.007
FEB 27.81	JAN 30.81	0.10	0.16	< 0.005	0.010	0.040	0.102	0.003
MAR 31.81	FEB 27.81	0.10	0.60	0.040	0.010	0.060	0.380	0.007
APR 30.81	MAR 31.81	0.20	1.09	0.125	0.130	0.120	0.770	U 0.068
MAY 29.81	APR 30.81	0.18	0.76	0.025	0.070	0.050	0.510	0.032
JUN 30.81	MAY 29.81	0.16	U 3.38	0.030	0.360	U 0.140	U 1.290	U 0.252
AUG 1.81	JUN 30.81	0.07	0.37	0.020	0.030	0.040	0.204	0.010
AUG 31.81	AUG 1.81	0.11	0.52	0.010	0.020	0.010	0.380	0.058
SEP 30.81	AUG 31.81	0.04	0.40	0.005	0.020	0.020	0.318	0.018
OCT 30.81	SEP 30.81	0.04	0.13	< 0.005	0.010	0.020	0.102	0.005
NOV 30.81	OCT 30.81	0.05	0.48	0.010	0.020	0.040	0.140	0.015
JAN 5.82	NOV 30.81	0.10	0.33	< 0.005	0.010	0.005	0.232	0.002

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL UG/L	ZINC UG/L	IRON UG/L	LEAD UG/L	VANADIUM MG/L	ALUMINUM MG/L
SEP 30.80	SEP 2.80	0.002	0.002	L< 0.002	L 0.035	0.007	< 0.002	L 0.080
OCT 31.80	SEP 30.80	0.001	< 0.001	0.004	0.014	0.005	< 0.002	0.019
NOV 28.80	OCT 31.80	0.002	< 0.001	0.014	0.066	0.011	< 0.002	0.041
DEC 31.80	NOV 28.80	*****	*****	*****	*****	*****	*****	*****
JAN 30.81	DEC 31.80	*****	*****	*****	*****	*****	*****	*****
FEB 27.81	JAN 30.81	0.001	< 0.001	0.007	0.012	0.003	< 0.002	0.006
MAR 31.81	FEB 27.81	*****	*****	*****	*****	*****	*****	*****
APR 30.81	MAR 31.81	0.012	< 0.001	0.007	0.301	0.002	< 0.002	0.346
MAY 29.81	APR 30.81	0.002	< 0.001	0.006	0.217	0.009	< 0.002	U 0.263
JUN 30.81	MAY 29.81	0.004	< 0.001	L 0.005	L 0.022	0.003	< 0.002	L 0.015
AUG 1.81	JUN 30.81	0.002	< 0.001	0.005	0.017	0.005	< 0.002	0.023
AUG 31.81	AUG 1.81	0.002	< 0.001	0.023	0.032	0.007	< 0.002	0.013
SEP 30.81	AUG 31.81	0.002	< 0.001	0.003	0.023	0.006	< 0.002	0.014
OCT 30.81	SEP 30.81	0.001	< 0.001	0.006	0.011	0.003	< 0.002	0.006
NOV 30.81	OCT 30.81	0.001	0.004	0.008	0.022	0.008	< 0.002	0.008
JAN 5.82	NOV 30.81	< 0.001	< 0.001	< 0.004	0.021	0.002	< 0.002	0.026

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : WHITNEY/CUMULATIVE/WET #19

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM MG/L	FREE H+ UG/L
SEP 30.80	SEP 2.80	L 0.001	0.0001	0.0603
OCT 31.80	SEP 30.80	0.001	< 0.0001	0.0380
NOV 28.80	OCT 31.80	< 0.002	< 0.0001	0.0229
DEC 31.80	NOV 28.80	*****	******	******
JAN 30.81	DEC 31.80	*****	******	******
FEB 27.81	JAN 30.81	0.001	< 0.0001	0.0832
MAR 31.81	FEB 27.81	*****	******	0.0457
APR 30.81	MAR 31.81	0.012	0.0003	0.0479
MAY 29.81	APR 30.81	0.005	0.0002	0.0269
JUN 30.81	MAY 29.81	L< 0.001	< 0.0001	U 0.0014
AUG 1.81	JUN 30.81	0.002	< 0.0001	0.0375
AUG 31.81	AUG 1.81	0.001	0.0001	0.1047
SEP 30.81	AUG 31.81	0.003	< 0.0001	0.0537
OCT 30.81	SEP 30.81	< 0.002	0.0002	0.0457
NOV 30.81	OCT 30.81	0.002	0.0009	0.0224
JAN 5.82	NOV 30.81	0.025	< 0.0001	0.0282

PART VII

NORTHWESTERN REGION

CUMULATIVE PRECIPITATION CHEMISTRY LISTINGS

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORION/CUMULATIVE/WET #31

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 09-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-OV HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
SEP 30-80	SEP 2,80	900	845	1	160.6	9	869	2	1	82		C
OCT 31-80	SEP 30,80	845	900	1	76.7	9	870	2	1	85	AC	
NOV 28-80	OCT 31,80	845	845	4	37.0	0	871	2	1	61	C	C
DEC 28-80	NOV 28,80	845	845	3	31.2	0	872	2	1	82	C	
JAN 30-81	DEC 28,80	945	930	2	6.4	0	873	2	1	96		
FEB 27-81	JAN 30,81	945	1015	4	53.7	0	874	2	1	39		N
APR 1-81	FEB 27,81	1030	845	1	43.1	0	1934	2	1	79		C
APR 30-81	APR 1,81	845	1000	3	55.2	0	1891	2	1	80		C
MAY 29-81	APR 30,81	1000	1245	1	37.1	0	13001	2	1	91	AD	
JUN 30-81	MAY 29,81	1215	900	1	165.0	0	13004	2	1	95	ACHIL	
JUL 31-81	JUN 30,81	900	900	1	14.0	0	13006	2	1	94	AD	
AUG 31-81	JUL 31,81	900	900	1	41.0	0	13008	2	1	84	ACD	
SEP 30-81	AUG 31,81	900	925	1	102.0	0	13010	2	1	88	AD	
OCT 30-81	SEP 30,81	925	845	1	57.5	0	13011	2	1	75	CD	
NOV 30-81	OCT 30,81	845	900	2	27.0	0	13013	2	1	112	CD	
JAN 5-82	NOV 30,81	900	900	2	40.0	0	13015	2	1	59	CFJ	

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH LAB	TOTAL H+ TO PH4.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
SEP 30-80	SEP 2,80	4290.0	U 7.8	4.60	0.0492	1.25	0.16	0.19
OCT 31-80	SEP 30,80	2125.0	16.5	4.57	0.0644	1.85	0.47	0.37
NOV 28-80	OCT 31,80	740.0	U 6.8	4.84	0.0460	0.60	0.17	0.13
DEC 28-80	NOV 28,80	840.0	19.5	4.46	0.2134	1.50	0.38	0.11
JAN 30-81	DEC 28,80	200.0	23.0	4.35	0.0764	1.70	0.47	0.35
FEB 27-81	JAN 30,81	U 685.0	13.2	4.52	0.0542	0.40	0.24	0.07
APR 1-81	FEB 27,81	1115.0	19.5	4.55	0.0634	2.90	0.51	0.44
APR 30-81	APR 1,81	1445.0	18.3	4.47	U 0.0	2.00	0.57	0.36
MAY 29-81	APR 30,81	1100.0	31.5	4.31	0.0886	4.05	0.53	0.31
JUN 30-81	MAY 29,81	5110.0	13.5	4.56	0.0558	1.45	0.19	0.22
JUL 31-81	JUN 30,81	430.0	11.7	5.57	0.0378	1.85	0.28	0.21
AUG 31-81	JUL 31,81	1125.0	U 8.8	4.89	0.0442	0.80	0.11	0.06
SEP 30-81	AUG 31,81	2945.0	13.0	4.59	0.0596	1.50	0.20	0.06
OCT 30-81	SEP 30,81	1416.0	18.8	4.44	0.0668	1.60	0.30	0.12
NOV 30-81	OCT 30,81	990.0	25.2	4.30	0.0842	1.95	0.57	0.17
JAN 5-82	NOV 30,81	772.0	18.8	4.36	0.0776	1.30	0.42	0.07

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : UORION/CUMULATIVE/WET #31 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
SEP 30.80	SEP 2.80	0.04	0.28	0.020	0.010	0.020	0.220	0.007
OCT 31.80	SEP 30.80	0.13	0.51	0.065	0.050	0.030	0.392	0.010
NOV 28.80	OCT 31.80	0.04	0.26	0.025	0.020	0.030	0.136	0.009
DEC 28.80	NOV 28.80	0.20	0.31	0.030	0.020	0.130	0.172	0.002
JAN 30.81	DEC 28.80	0.15	*****	0.030	0.010	0.090	0.232	*****
FEB 27.81	JAN 30.81	0.02	0.18	< 0.005	0.010	0.020	0.134	0.004
APR 1.81	FEB 27.81	0.05	0.80	0.045	0.010	0.050	0.800	0.006
APR 30.81	APR 1.81	0.07	0.63	0.055	0.008	0.030	0.470	0.055
MAY 29.81	APR 30.81	0.17	1.20	0.065	0.190	0.080	0.800	0.075
JUN 30.81	MAY 29.81	0.08	0.35	0.030	0.050	0.070	0.100	0.010
JUL 31.81	JUN 30.81	0.07	1.01	0.045	0.020	0.050	0.760	0.014
AUG 31.81	JUL 31.81	0.08	0.50	0.020	0.050	0.020	0.210	0.070
SEP 30.81	AUG 31.81	0.02	0.28	0.010	0.010	0.020	0.206	0.032
OCT 30.81	SEP 30.81	0.06	0.21	0.010	0.030	0.050	0.178	0.010
NOV 30.81	OCT 30.81	< 0.01	0.44	0.025	0.020	0.050	0.336	0.010
JAN 5.82	NOV 30.81	0.10	0.21	0.005	0.010	0.030	0.202	0.003

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINIUM MG/L
SEP 30.80	SEP 2.80	< 0.001	< 0.001	0.002	0.011	0.001	< 0.002	< 0.006
OCT 31.80	SEP 30.80	0.006	0.001	0.008	0.106	0.006	< 0.002	0.104
NOV 28.80	OCT 31.80	0.002	< 0.001	< 0.005	0.039	0.001	< 0.002	0.018
DEC 28.80	NOV 28.80	0.002	< 0.001	0.020	0.023	0.006	< 0.002	0.030
JAN 30.81	DEC 28.80	*****	*****	*****	*****	*****	*****	*****
FEB 27.81	JAN 30.81	0.001	< 0.001	0.015	0.072	0.003	< 0.002	0.020
APR 1.81	FEB 27.81	0.005	< 0.001	0.010	0.131	0.006	< 0.002	0.208
APR 30.81	APR 1.81	< 0.001	< 0.001	0.011	0.132	< 0.001	< 0.002	0.105
MAY 29.81	APR 30.81	0.006	< 0.001	0.015	0.103	0.005	< 0.002	0.053
JUN 30.81	MAY 29.81	0.002	< 0.001	L 0.008	L 0.010	0.002	< 0.002	L< 0.005
JUL 31.81	JUN 30.81	*****	*****	*****	*****	*****	*****	*****
AUG 31.81	JUL 31.81	0.002	< 0.001	0.004	0.018	0.007	< 0.002	0.024
SEP 30.81	AUG 31.81	0.001	< 0.001	< 0.003	0.016	0.003	< 0.002	0.013
OCT 30.81	SEP 30.81	< 0.001	< 0.001	0.015	0.010	0.011	< 0.002	< 0.007
NOV 30.81	OCT 30.81	0.003	< 0.001	0.012	0.039	0.009	< 0.002	0.023
JAN 5.82	NOV 30.81	< 0.001	< 0.001	0.003	0.019	0.005	< 0.002	0.013

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORION/CUMULATIVE/WET #31

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM MG/L	FREE H+ MG/L
SEP 30.80	SEP 2.80	< 0.001	< 0.0001	0.0251
OCT 31.80	SEP 30.80	< 0.003	< 0.0001	0.0269
NOV 28.80	OCT 31.80	< 0.002	< 0.0001	0.0145
DEC 28.80	NOV 28.80	0.002	0.0001	0.0347
JAN 30.81	DEC 28.80	*****	******	0.0447
FEB 27.81	JAN 30.81	0.006	< 0.0001	0.0302
APR 1.81	FEB 27.81	0.004	< 0.0010	0.0282
APR 30.81	APR 1.81	0.021	< 0.0001	0.0339
MAY 29.81	APR 30.81	0.006	0.0001	0.0490
JUN 30.81	MAY 29.81	L< 0.001	< 0.0001	0.0275
JUL 31.81	JUN 30.81	*****	******	0.0027
AUG 31.81	JUL 31.81	0.001	0.0001	0.0129
SEP 30.81	AUG 31.81	0.001	0.0002	0.0257
OCT 30.81	SEP 30.81	0.003	< 0.0001	0.0363
NOV 30.81	OCT 30.81	0.003	0.0002	0.0501
JAN 5.82	NOV 30.81	0.002	0.0002	0.0437

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : EAR FALLS/CUMULATIVE/WET #35

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 04-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-DV HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
SEP 30.80	SEP 2.80	900	900	1	106.3	9	880	2	1	69	ARC	HH
OCT 31.80	SEP 30.80	900	900	1	35.2	9	881	2	1	40	HF	N
NOV 30.80	OCT 31.80	900	900	2	13.0	9	882	2	1	61	FI	
DEC 31.80	DEC 1.80	900	850	3	24.1	0	883	2	1	***	FILJ	
JAN 31.81	DEC 31.80	900	830	4	18.8	0	884	2	1	6	FILJ	N
FEB 28.81	JAN 31.81	900	900	3	6.3	9	885	2	1	***	FIE	
MAR 31.81	FEB 28.81	930	930	1	12.4	0	1931	2	1	57	CJ	
APR 30.81	MAR 30.81	900	830	3	32.1	0	1901	2	1	57		H
JUN 1.81	APR 30.81	900	1100	1	18.1	9	13501	2	1	***	ACFKE	
JUN 30.81	JUN 4.81	1520	900	1	115.0	0	13504	2	1	***	ACDOE	
JUL 31.81	JUN 30.81	900	900	1	50.0	0	13506	2	1	8	ACDF	N
AUG 31.81	JUL 31.81	900	1000	1	75.0	0	13508	2	1	25	ACDHJF	N
SEP 30.81	AUG 31.81	1000	900	1	91.0	0	13510	2	1	***	ADG	N
OCT 30.81	SEP 30.81	900	900	1	36.4	0	13511	2	1	39	CDF	N
NOV 30.81	OCT 30.81	930	900	2	48.7	0	13513	2	1	***	CDG	N
JAN 5.82	NOV 30.81	900	930	2	22.5	0	13515	2	1	***	CDGHI	

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
SEP 30.80	SEP 2.80	2415.0	U 8.9	U 6.44	0.0360	0.75	0.13	0.15
OCT 31.80	SEP 30.80	U 460.0	U 3.9	U 5.99	0.0302	0.55	0.06	0.32
NOV 30.80	OCT 31.80	260.0	*****	4.96	******	0.55	0.10	0.12
DEC 31.80	DEC 1.80	******	*****	4.60	******	*****	*****	*****
JAN 31.81	DEC 31.80	U 40.0	21.5	4.56	******	*****	*****	*****
FEB 28.81	JAN 31.81	******	*****	*****	******	*****	*****	*****
MAR 31.81	FEB 28.81	230.0	*****	U 6.05	******	3.70	0.74	U 1.09
APR 30.81	MAR 30.81	600.0	20.6	U 7.01	0.0334	2.50	0.41	U 2.03
JUN 1.81	APR 30.81	******	*****	*****	******	*****	*****	*****
JUN 30.81	JUN 4.81	******	*****	*****	******	*****	*****	*****
JUL 31.81	JUN 30.81	U 140.0	*****	5.83	******	0.90	0.21	0.16
AUG 31.81	JUL 31.81	U 615.0	U 8.8	5.16	0.0388	0.95	0.22	0.18
SEP 30.81	AUG 31.81	U 585.0	U 7.4	5.29	0.0394	1.00	0.10	0.07
OCT 30.81	SEP 30.81	U 461.0	12.6	4.54	0.0614	1.10	0.19	0.14
NOV 30.81	OCT 30.81	U 446.0	U 8.6	5.00	0.0420	1.10	0.23	0.23
JAN 5.82	NOV 30.81	512.0	11.4	4.63	0.0596	0.70	0.27	0.11

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : EAR FALL'S/CUMULATIVE/WET #35

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
SEP 30.80	SEP 2.80	0.08	U 1.45	0.020	0.180	0.050	U 0.770	0.128
OCT 31.80	SEP 30.80	0.10	0.24	0.035	*****	*****	0.176	0.010
NOV 30.80	OCT 31.80	0.05	0.12	0.025	0.010	0.040	0.082	0.002
DEC 31.80	DEC 1.80	*****	*****	*****	*****	*****	*****	*****
JAN 31.81	DEC 31.80	*****	*****	*****	*****	*****	*****	*****
FEB 28.81	JAN 31.81	*****	*****	*****	*****	*****	*****	*****
MAR 31.81	FEB 28.81	0.81	1.35	0.175	0.140	U 0.680	1.050	0.043
APR 30.81	MAR 30.81	0.22	U 1.92	0.445	U 0.330	0.220	0.620	U 0.220
JUN 1.81	APR 30.81	*****	*****	*****	*****	*****	*****	*****
JUN 30.81	JUN 4.81	*****	*****	*****	*****	*****	*****	*****
JUL 31.81	JUN 30.81	0.08	0.90	0.030	0.060	0.010	0.560	0.025
AUG 31.81	JUL 31.81	0.12	0.55	0.025	0.070	0.020	0.352	0.055
SEP 30.81	AUG 31.81	0.09	U 1.75	0.015	0.110	0.070	0.228	0.090
OCT 30.81	SEP 30.81	0.10	0.22	0.010	0.040	0.020	0.144	0.042
NOV 30.81	OCT 30.81	< 0.01	0.38	0.030	0.020	0.030	0.290	0.022
JAN 5.82	NOV 30.81	0.12	0.25	0.010	0.030	0.060	0.180	0.007

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINUM MG/L
SEP 30.80	SEP 2.80	0.001	0.002	0.003	0.042	0.001	< 0.002	0.031
OCT 31.80	SEP 30.80	*****	*****	*****	*****	*****	*****	*****
NOV 30.80	OCT 31.80	*****	*****	*****	*****	*****	*****	*****
DEC 31.80	DEC 1.80	*****	*****	*****	*****	*****	*****	*****
JAN 31.81	DEC 31.80	*****	*****	*****	*****	*****	*****	*****
FEB 28.81	JAN 31.81	*****	*****	*****	*****	*****	*****	*****
MAR 31.81	FEB 28.81	*****	*****	*****	*****	*****	*****	*****
APR 30.81	MAR 30.81	0.095	0.002	0.024	U 2.472	0.008	0.005	U 1.853
JUN 1.81	APR 30.81	*****	*****	*****	*****	*****	*****	*****
JUN 30.81	JUN 4.81	*****	*****	*****	*****	*****	*****	*****
JUL 31.81	JUN 30.81	*****	*****	*****	*****	*****	*****	*****
AUG 31.81	JUL 31.81	0.007	< 0.001	0.012	U 0.181	0.010	< 0.002	U 0.120
SEP 30.81	AUG 31.81	0.002	0.008	0.005	0.052	0.003	< 0.002	0.049
OCT 30.81	SEP 30.81	0.002	< 0.001	0.003	0.017	0.006	< 0.002	0.009
NOV 30.81	OCT 30.81	*****	*****	*****	*****	*****	*****	*****
JAN 5.82	NOV 30.81	0.004	< 0.001	0.011	0.074	0.007	< 0.002	0.057

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : EAR FALL'S/CUMULATIVE/WET #35

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM MG/L	FREE H+ MG/L
SEP 30.80	SEP 2.80	0.001	< 0.0001	U 0.0004
OCT 31.80	SEP 30.80	*****	******	U 0.0010
NOV 30.80	OCT 31.80	*****	******	0.0110
DEC 31.80	DEC 1.80	*****	******	0.0251
JAN 31.81	DEC 31.80	*****	******	0.0275
FEB 28.81	JAN 31.81	*****	******	******
MAR 31.81	FEB 28.81	*****	******	U 0.0009
APR 30.81	MAR 30.81	0.024	0.0001	U 0.0001
JUN 1.81	APR 30.81	*****	******	******
JUN 30.81	JUN 4.81	*****	******	******
JUL 31.81	JUN 30.81	*****	******	0.0015
AUG 31.81	JUL 31.81	0.004	0.0001	0.0069
SEP 30.81	AUG 31.81	< 0.003	0.0001	0.0051
OCT 30.81	SEP 30.81	0.013	< 0.0001	0.0288
NOV 30.81	OCT 30.81	*****	******	0.0100
JAN 5.82	NOV 30.81	0.003	0.0005	0.0234

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : EXP. LAKES AREA/CUMULATIVE/WET #34

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 09-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
OCT 30.81	OCT 6.81	1600	830	1	27.1	0	13126	2	1	102	ACD	
NOV 30.81	OCT 30.81	900	830	3	23.0	0	13128	2	1	81	D	
JAN 5.82	NOV 30.81	900	900	*	19.0	0	13130	2	1	***	EFIK	

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
OCT 30.81	OCT 6.81	906.0	16.0	4.43	0.0676	1.50	0.26	0.14
NOV 30.81	OCT 30.81	609.0	17.2	4.64	0.0570	2.25	0.49	0.26
JAN 5.82	NOV 30.81	******	*****	*****	******	*****	*****	*****

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
OCT 30.81	OCT 6.81	0.02	0.29	0.010	0.020	0.020	0.244	0.010
NOV 30.81	OCT 30.81	0.02	0.72	0.040	0.020	0.030	0.640	0.020
JAN 5.82	NOV 30.81	*****	*****	*****	*****	*****	*****	*****

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINUM MG/L
OCT 30.81	OCT 6.81	0.002	< 0.001	0.004	0.023	0.007	< 0.002	0.012
NOV 30.81	OCT 30.81	0.004	< 0.001	0.015	0.072	0.003	< 0.002	0.032
JAN 5.82	NOV 30.81	*****	*****	*****	*****	*****	*****	*****

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : EXP. LAKES AREA/CUMULATIVE/WET #34

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM MG/L	FREE H+ UG/L
OCT 30.81	OCT 6.81	0.009	0.0001	0.0372
NOV 30.81	OCT 30.81	0.003	0.0002	0.0229
JAN 5.82	NOV 30.81	*****	******	******

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NAKINA/CUMULATIVE/WET #30 PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 09-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-04 HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
SEP 30.80	SEP 2.80	900	850	1	68.5	9	875	2	1	130		NHCM
OCT 31.80	OCT 1.80	900	900	3	47.1	9	2218	2	1	***	GH	X
NOV 28.80	OCT 31.80	900	900	4	26.9	9	876	2	1	25		NHM
DEC 31.80	NOV 28.80	900	900	4	28.5	9	877	2	1	12		N
JAN 30.81	DEC 31.80	900	900	4	6.3	0	878	2	1	12	F	N
FEB 27.81	JAN 30.81	900	900	4	60.3	0	879	2	1	53	H	
MAR 31.81	FEB 27.81	900	900	4	19.4	0	1933	2	1	39		N
APR 30.81	MAR 31.81	900	900	4	41.8	0	1892	2	1	44	F	N
MAY 28.81	APR 30.81	800	1145	1	28.7	0	13251	2	1	***	CDG	H
JUN 30.81	MAY 28.81	1600	1020	1	80.0	0	13254	2	1	51	CDHFIJ	
AUG 4.81	JUN 30.81	1120	1000	1	20.0	0	13256	2	1	90	AD	HCM
AUG 31.81	AUG 4.81	900	900	1	32.5	0	13258	2	1	86	DC	M
SEP 29.81	AUG 31.81	930	1200	1	37.5	0	13260	2	1	81	CD	HCM
OCT 30.81	SEP 29.81	1100	1530	1	33.6	9	13261	2	1	72	CFH	H
NOV 30.81	OCT 30.81	1530	1030	2	44.9	0	13263	2	1	33	CDQL	NHC
JAN 5.82	NOV 30.81	1100	840	2	22.5	0	13265	2	1	66	CDJF	

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
SEP 30.80	SEP 2.80	2895.0	10.2	U 6.65	0.0264	0.95	0.14	1.08
OCT 31.80	OCT 1.80	******	*****	*****	******	*****	*****	*****
NOV 28.80	OCT 31.80	U 220.0	*****	U 7.54	******	1.05	0.20	0.44
DEC 31.80	NOV 28.80	U 115.0	*****	U 6.39	******	3.20	0.72	*****
JAN 30.81	DEC 31.80	U 25.0	26.8	5.09	******	*****	*****	*****
FEB 27.81	JAN 30.81	1055.0	14.3	4.54	0.0580	1.30	0.18	0.06
MAR 31.81	FEB 27.81	U 250.0	*****	U 5.69	0.0348	3.30	0.46	0.78
APR 30.81	MAR 31.81	U 605.0	31.2	U 7.33	0.0244	2.95	0.50	*****
MAY 28.81	APR 30.81	1000.0	14.0	U 5.45	0.0262	3.45	0.35	U 1.57
JUN 30.81	MAY 28.81	1340.0	10.8	U 5.47	0.0398	1.80	0.21	0.76
AUG 4.81	JUN 30.81	585.0	U 8.0	U 6.32	0.0348	0.50	0.12	0.34
AUG 31.81	AUG 4.81	915.0	U 3.8	U 5.68	0.0342	0.30	0.07	0.23
SEP 29.81	AUG 31.81	990.0	14.7	U 5.88	0.0304	1.30	0.18	U 1.63
OCT 30.81	SEP 29.81	794.0	10.0	U 5.82	0.0330	1.75	0.28	0.80
NOV 30.81	OCT 30.81	U 488.0	19.2	U 6.87	0.0260	2.15	0.45	U 1.97
JAN 5.82	NOV 30.81	489.0	19.2	6.17	0.0778	0.80	0.48	0.10

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NAKINA/CUMULATIVE/WET #30 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
SEP 30.80	SEP 2.80	0.08	0.62	U 0.230	0.110	0.050	0.236	0.062
OCT 31.80	OCT 1.80	*****	*****	*****	*****	*****	*****	*****
NOV 28.80	OCT 31.80	0.14	0.20	U 1.080	0.020	0.060	0.056	0.017
DEC 31.80	NOV 28.80	0.56	*****	*****	*****	*****	0.296	*****
JAN 30.81	DEC 31.80	*****	*****	*****	*****	*****	*****	*****
FEB 27.81	JAN 30.81	0.04	0.16	0.005	< 0.010	0.020	0.112	0.002
MAR 31.81	FEB 27.81	0.16	1.00	0.155	0.040	0.130	0.850	0.020
APR 30.81	MAR 31.81	0.23	0.72	*****	0.080	0.110	0.380	0.030
MAY 28.81	APR 30.81	0.22	0.38	U 0.320	0.060	0.040	0.276	0.010
JUN 30.81	MAY 28.81	0.08	0.82	0.150	0.210	0.030	0.390	0.055
AUG 4.81	JUN 30.81	0.09	0.70	0.075	0.020	0.010	0.510	0.018
AUG 31.81	AUG 4.81	0.10	0.25	0.045	0.020	U 0.010	0.128	0.018
SEP 29.81	AUG 31.81	0.22	0.38	U 0.295	0.030	0.030	0.290	0.050
OCT 30.81	SEP 29.81	0.09	0.20	0.170	0.020	0.020	0.148	0.028
NOV 30.81	OCT 30.81	0.09	0.35	U 0.420	0.020	0.040	0.244	0.022
JAN 5.82	NOV 30.81	0.10	0.23	0.010	0.020	0.030	0.192	0.001

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINUM MG/L
SEP 30.80	SEP 2.80	0.003	< 0.001	0.002	0.124	0.001	< 0.002	0.068
OCT 31.80	OCT 1.80	*****	*****	*****	*****	*****	*****	*****
NOV 28.80	OCT 31.80	*****	*****	*****	*****	*****	*****	*****
DEC 31.80	NOV 28.80	*****	*****	*****	*****	*****	*****	*****
JAN 30.81	DEC 31.80	*****	*****	*****	*****	*****	*****	*****
FEB 27.81	JAN 30.81	0.001	< 0.001	0.011	0.052	0.004	< 0.002	0.009
MAR 31.81	FEB 27.81	*****	*****	*****	*****	*****	*****	*****
APR 30.81	MAR 31.81	0.030	< 0.001	0.015	U 1.020	0.002	< 0.002	U 0.446
MAY 28.81	APR 30.81	0.008	< 0.001	0.005	0.167	0.004	0.002	0.123
JUN 30.81	MAY 28.81	0.006	< 0.001	L 0.004	L 0.020	0.005	< 0.002	L 0.013
AUG 4.81	JUN 30.81	0.003	< 0.001	0.005	0.060	0.002	< 0.002	0.061
AUG 31.81	AUG 4.81	0.002	< 0.001	0.006	0.034	0.003	< 0.002	0.023
SEP 29.81	AUG 31.81	0.005	< 0.001	0.003	0.128	0.002	< 0.002	0.045
OCT 30.81	SEP 29.81	0.004	< 0.001	0.013	U 0.140	0.004	< 0.002	0.052
NOV 30.81	OCT 30.81	0.006	< 0.001	0.012	0.237	0.004	< 0.002	0.123
JAN 5.82	NOV 30.81	*****	*****	*****	*****	*****	*****	*****

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NAKINA/CUMULATIVE/WET #30

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM MG/L	FREE H+ MG/L
SEP 30.80	SEP 2.80	0.001	0.0001	U 0.0002
OCT 31.80	OCT 1.80	*****	******	******
NOV 28.80	OCT 31.80	*****	******	U 0.0000
DEC 31.80	NOV 28.80	*****	******	U 0.0004
JAN 30.81	DEC 31.80	*****	******	0.0091
FEB 27.81	JAN 30.81	0.003	< 0.0001	0.0298
MAR 31.81	FEB 27.81	*****	******	U 0.0020
APR 30.81	MAR 31.81	0.016	U 0.0220	U 0.0000
MAY 28.81	APR 30.81	0.011	0.0001	U 0.0004
JUN 30.81	MAY 28.81	L< 0.001	< 0.0001	U 0.0011
AUG 4.81	JUN 30.81	< 0.003	< 0.0001	U 0.0005
AUG 31.81	AUG 4.81	0.002	0.0001	U 0.0021
SEP 29.81	AUG 31.81	0.002	< 0.0001	U 0.0001
OCT 30.81	SEP 29.81	0.007	0.0001	U 0.0015
NOV 30.81	OCT 30.81	< 0.003	0.0003	U 0.0001
JAN 5.82	NOV 30.81	*****	******	0.0427

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PICKLE LAKE/CUMULATIVE/WET #36 PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 09-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
SEP 2.80	JUL 26.80	****	****	1	115.8	9	2220	2	1	49	RF	NH
SEP 30.80	SEP 1.80	900	830	1	126.6	9	885	2	1	***	G	
OCT 30.80	SEP 30.80	830	1030	3	65.3	9	2223	2	1	***	AG	X
NOV 28.80	OCT 30.80	1000	1030	3	12.2	9	887	2	1	***	FE	
DEC 31.80	DEC 17.80	1000	1000	2	10.4	9	888	2	1	38	HF	N
JAN 30.81	DEC 31.80	1000	1100	2	17.9	9	889	2	1	55	F	
FEB 27.81	JAN 30.81	1000	1400	2	32.6	9	890	2	1	4	HFI	N
MAR 30.81	MAR 2.81	1000	1100	4	9.0	9	1932	2	1	46		N
MAY 1.81	MAR 31.81	****	930	3	87.7	0	1920	2	1	53	F	H
MAY 29.81	APR 30.81	1000	1030	1	22.2	0	13751	2	1	58	AC	
JUN 29.81	MAY 29.81	1030	830	1	54.9	0	13754	2	1	***	ACG	N
JUL 31.81	JUN 30.81	830	930	*	47.0	0	13756	2	1	***	ACG	NCM
AUG 31.81	AUG 18.81	930	1030	1	20.7	0	13758	2	1	***	HICE	
SEP 30.81	AUG 31.81	1030	930	1	70.0	0	13760	2	1	***	RDGH	NH
NOV 2.81	SEP 30.81	930	1015	1	39.2	0	13761	2	1	71	ACD	C
NOV 30.81	OCT 30.81	1015	1000	2	40.0	0	13763	2	1	80	CD	HCM
JAN 5.82	NOV 30.81	1030	950	2	67.8	0	13765	2	1	43	CD	N

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
SEP 2.80	JUL 26.80	U 1865.0	U 7.8	5.18	0.0264	1.20	0.19	0.66
SEP 30.80	SEP 1.80	2760.0	U 5.6	5.43	0.0210	0.75	0.17	0.15
OCT 30.80	SEP 30.80	******	*****	*****	******	*****	*****	*****
NOV 28.80	OCT 30.80	******	*****	*****	******	*****	*****	*****
DEC 31.80	DEC 17.80	U 130.0	U 6.7	5.10	******	0.75	0.18	*****
JAN 30.81	DEC 31.80	320.0	13.8	4.70	0.0536	1.10	0.23	0.18
FEB 27.81	JAN 30.81	U 50.0	*****	4.86	******	1.55	0.19	*****
MAR 30.81	MAR 2.81	U 135.0	*****	U 7.15	******	4.30	0.57	*****
MAY 1.81	MAR 31.81	1520.0	U 7.4	6.35	0.0274	1.10	0.18	0.47
MAY 29.81	APR 30.81	420.0	25.4	U 6.60	0.0370	U 5.05	0.52	U 2.60
JUN 29.81	MAY 29.81	U 880.0	U 8.2	5.18	0.0800	1.10	0.16	0.20
JUL 31.81	JUN 30.81	U 460.0	U 43.6	U 5.57	U 0.1576	U 2.35	0.11	0.49
AUG 31.81	AUG 18.81	******	*****	*****	******	*****	*****	*****
SEP 30.81	AUG 31.81	U 650.0	U 6.8	5.89	0.0330	1.05	0.14	0.40
NOV 2.81	SEP 30.81	914.0	12.2	4.95	0.0417	1.25	0.20	0.36
NOV 30.81	OCT 30.81	1039.0	13.5	U 6.88	0.0254	1.15	0.26	U 1.63
JAN 5.82	NOV 30.81	U 957.0	U 9.2	4.73	0.0436	0.55	0.17	0.10

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PICKLE LAKE/CUMULATIVE/WET #36

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
SEP 2.80	JUL 26.80	0.10	0.38	0.100	0.040	0.020	0.260	0.018
SEP 30.80	SEP 1.80	0.05	0.42	0.015	0.020	0.020	0.324	0.005
OCT 30.80	SEP 30.80	*****	*****	*****	*****	*****	*****	*****
NOV 28.80	OCT 30.80	*****	*****	*****	*****	*****	*****	*****
DEC 31.80	DEC 17.80	0.19	*****	*****	*****	*****	0.106	*****
JAN 30.81	DEC 31.80	0.12	0.33	0.030	< 0.010	0.070	0.148	0.012
FEB 27.81	JAN 30.81	0.28	*****	*****	*****	*****	*****	*****
MAR 30.81	MAR 2.81	0.54	*****	*****	*****	*****	0.870	*****
MAY 1.81	MAR 31.81	0.11	0.43	0.110	0.110	0.090	0.274	0.025
MAY 29.81	APR 30.81	0.26	0.85	U 0.600	0.160	*****	0.252	0.088
JUN 29.81	MAY 29.81	0.10	0.42	0.050	0.140	0.040	0.210	0.025
JUL 31.81	JUN 30.81	0.27	0.72	U 0.135	U 0.570	U 0.230	U 3.500	0.038
AUG 31.81	AUG 18.81	*****	*****	*****	*****	*****	*****	*****
SEP 30.81	AUG 31.81	0.04	0.28	0.075	0.070	0.040	0.182	0.045
NOV 2.81	SEP 30.81	0.06	0.22	0.060	0.050	0.030	0.156	0.042
NOV 30.81	OCT 30.81	< 0.01	0.28	U 0.310	0.020	0.030	0.182	0.037
JAN 5.82	NOV 30.81	0.09	0.08	0.010	0.020	0.060	0.050	0.008

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINUM MG/L
SEP 2.80	JUL 26.80	0.010	U 0.061	0.003	U 0.197	0.004	< 0.005	U 0.191
SEP 30.80	SEP 1.80	0.001	< 0.001	0.003	0.021	0.002	< 0.002	0.041
OCT 30.80	SEP 30.80	*****	*****	*****	*****	*****	*****	*****
NOV 28.80	OCT 30.80	*****	*****	*****	*****	*****	*****	*****
DEC 31.80	DEC 17.80	*****	*****	*****	*****	*****	*****	*****
JAN 30.81	DEC 31.80	*****	*****	*****	*****	*****	*****	*****
FEB 27.81	JAN 30.81	*****	*****	*****	*****	*****	*****	*****
MAR 30.81	MAR 2.81	0.014	< 0.001	0.004	U 0.444	< 0.001	< 0.002	U 0.450
MAY 1.81	MAR 31.81	*****	*****	*****	*****	*****	*****	*****
MAY 29.81	APR 30.81	0.004	< 0.001	L 0.004	L 0.133	0.002	< 0.002	L 0.032
JUN 29.81	MAY 29.81	*****	*****	*****	*****	*****	*****	*****
JUL 31.81	JUN 30.81	*****	*****	*****	*****	*****	*****	*****
AUG 31.81	AUG 18.81	0.006	< 0.001	0.004	0.062	0.001	< 0.002	0.098
SEP 30.81	AUG 31.81	0.003	< 0.001	0.004	0.036	0.007	< 0.002	0.036
NOV 2.81	SEP 30.81	0.004	< 0.001	0.011	0.124	0.002	< 0.002	0.124
NOV 30.81	OCT 30.81	0.002	< 0.001	0.008	0.044	0.004	< 0.002	0.010
JAN 5.82	NOV 30.81							

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PICKLE LAKE/CUMULATIVE/WET #36

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM MG/L	FREE H+ MG/L
SEP 2.80	JUL 26.80	0.004	0.0002	0.0007
SEP 30.80	SEP 1.80	0.002	< 0.0001	0.0037
OCT 30.80	SEP 30.80	*****	******	******
NOV 28.80	OCT 30.80	*****	******	******
DEC 31.80	DEC 17.80	*****	******	0.0079
JAN 30.81	DEC 31.80	*****	******	0.0200
FEB 27.81	JAN 30.81	*****	******	0.0138
MAR 30.81	MAR 2.81	*****	******	U 0.0001
MAY 1.81	MAR 31.81	0.016	0.0002	0.0004
MAY 29.81	APR 30.81	*****	******	U 0.0003
JUN 29.81	MAY 29.81	L< 0.001	< 0.0001	0.0066
JUL 31.81	JUN 30.81	*****	******	U 0.0003
AUG 31.81	AUG 18.81	*****	******	******
SEP 30.81	AUG 31.81	0.002	< 0.0001	0.0013
NOV 2.81	SEP 30.81	0.008	0.0002	0.0112
NOV 30.81	OCT 30.81	0.002	0.0001	U 0.0001
JAN 5.82	NOV 30.81	0.003	0.0003	0.0186

ONTARIO MINISTRY OF THE ENVIRONMENT
CUMULATIVE SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : QUETICO CENTRE/CUMULATIVE/WET #32

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-ICE	GAUGE DEPTH(MM)	GAUGE TYPE 00-APIOS 09-AES	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	SAMPLER EFFICIENCY (%)	COMMENTS FIELD	COMMENTS OFFICE
JAN 5.82	NOV 30.81	1400	1500	2	*****	*	45201	2	1	***	C	

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	CALCIUM MG/L
JAN 5.82	NOV 30.81	768.0	14.9	4.54	0.0584	0.60	0.36	0.05

REMOVAL DATE	EXPOSURE DATE	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	PHOSPHOR MG/L
JAN 5.82	NOV 30.81	0.06	0.18	< 0.005	0.010	0.030	0.130	0.001

REMOVAL DATE	EXPOSURE DATE	MANGANSE MG/L	NICKEL MG/L	ZINC MG/L	IRON MG/L	LEAD MG/L	VANADIUM MG/L	ALUMINUM MG/L
JAN 5.82	NOV 30.81	0.001	< 0.001	< 0.005	0.022	0.001	< 0.002	0.011

REMOVAL DATE	EXPOSURE DATE	COPPER MG/L	CADMIUM MG/L	FREE H+ MG/L
JAN 5.82	NOV 30.81	0.003	0.0001	0.0284

POOR

QUALITY

ORIGINAL